CONSTRUCTION NEWS

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RAILWAYS.

(denotes that this work is advertised in Engineering News.)*

ALGOMA CENTRAL & HUDSON BAY.—The limit of time for submitting bids for the clearing, grading and bridge work on the extension of 31 miles (more or less) of the Algoma Central & Hudson Bay Ry., between Hawk Lake Junction, A. C. & H. B. Ry., and Hobon, C. P. R., has been extended from April 15 to noon, April 30. Profile specifications and form of tender may be seen at offices of The Canadian Engineer, 62 Church St., Toronto; B. 33, Board of Trade Building, Montreal; 315 Nanton Building, Winnipeg; or apply to C. H. Coburn, Ch. Engr., A. C. & H. B. Ry., Sault Ste. Marie, Ont., to whom all bids should be addressed. Noted on March 3.

BINGHAM & GARFIELD.—Contract has been awarded to the UTAH CONSTRUCTION CO., Tribune Bldg., Salt Lake City, Utah, for construction of this line. Surveys are completed. It is announced that this railway will be built independently by a corporation which is composed of the same stockholders as the Utah Copper Co. It will run from the copper mines in Bingham canyon to the mills at Garfield, Utah, and thence to the American Smelting & Refining Co.'s smelters to a connection with the San Pedro, Los Angeles & Salt Lake R. R. The line will be located on the high slopes of the Oquirrh range of mountains. The grading work will be very heavy and three or four tunnels will pierce the range. The grading contract is to be completed within ten months. D. C. Jackling is Gen. Mgr. of the copper and railroad companies, McCornick Block, Salt Lake City.

CANADIAN NORTHERN.—Surveys have been completed and bids will be called at once for the construction of the line between Hope and New Westminster, B. C., a distance of about 56 miles.

Surveys have been completed and bids for construction will be invited this spring for the construction of the main line between Edmonton, Alta., and the Rocky Mountains, a distance of approximately 200 miles, it is reported. T. Turnbull is Asst. Ch. Engr., Winnipeg, Man.

CANADIAN PACIFIC.—Press reports state that improvements are planned at the C. P. R. yards at Kamloops, B. C., to cost $175,000. J. E. Schwitzer is Asst. Ch. Engr., Winnipeg, Man.

Company has filed its plans for the proposed lines between Regina, Prince Albert and Saskatchewan, a distance of 129 miles. Bids will be called for immediately, it is stated.

CANADIAN PACIFIC.—Contracts have been awarded as follows recently: To the J. D. McARTHUR CO., Winnipeg, Man., the extension from Outlook, Sask., to Macklin, 147.7 miles; from Weyburn, Sask., to Forward, 25 miles. To FOLEY, WELCH & STEWART, Spokane, Wash., for the Kipp, Alta., extension from Carmangay, 30 miles; also an extension to the Langdon branch from Irricanna. Noted on March 17.

CANADIAN PACIFIC.—Bids will be received until noon, May 1, by J. S. Dennis, Asst. to the Second Vice-Pres., Canadian Pacific Ry. Co., Calgary, Alta., for all excavation required to complete the canal system in the eastern section of the company's irrigation block in Alberta, amounting to about 25,000,000 cu. yds. of material. Plans and specifications are on file at office of Engineering News, New York.

CAROLINA, CLINCHFIELD & OHIO.—We are officially advised that contract has been awarded to RINEHART & DENNIS CO., Evans Bldg., Washington, D. C., for six miles of work on the C., C. & O. Ry., in Russell County, Va. Estimated cost, $100,000.

CENTRAL IDAHO R. R.—Surveys have been started by this company which was recently incorporated in Utah. The officers of the new company are officials of the Oregon Short Line and W. H. Bancroft, Vice-Pres. and Gen. Mgr. of the latter road, is president of the new line holding as trustee 2,195 of the 2,200 shares of the capital stock. Other officers are J. A. Reeves, Vice-Pres. and Director; C. H. Jenkinson, Treas.; G. K. Smith, Secy., and P. L. Williams, William Ashton and F. H. Knickerbocker, Directors. The company is organized to build a line 220 miles long, starting from the station of Owinza, in Lincoln County, Idaho, on the main line of the Oregon Short Line, and running in a northwesterly direction through Lincoln County, Elmore and Ada Counties to Boise, and on to a connection with the Payette Valley R. R. at New Plymouth, in Canyon County. Headquarters of the company in Utah will be in Salt Lake City. Pocatello will be the headquarters for the company in Idaho. It is expected that the line will be completed by the close of the year 1911.

CHUCAMALLA VALLEY R. R.—Supplemental to the irrigation project of the Chucawalla Development Co. in the eastern end of Riverside County, Cal., it is proposed to build a railroad 52 miles in length through the Chucawalla valley, starting south from Blythe, on the Parker cut-off of the Santa Fe. Articles of incorporation have been filed with the county clerk, for the Chucawalla R. R. Co., with a capitalization of $1,000,000, of which $65,000 has been paid in. The incorporators are R. M. Teague, of San Dimas, and M. M. Clark, E. M. Skeats, J. Vincent Hannon and J. H. Clancy, of Los Angeles. The Chucawalla Development Co. started a year ago on a project to reclaim the mesa northwest of the Palo Verde valley, along the Colorado River, where the Blythe ranch is located.

DENVER & GULF.—Plans are under way for building the railway which is to connect Denver, Colo., and Dallas, Tex. The line is eventually to be extended south to the Gulf of Mexico. A 24-mile branch from the main line north of Texhoma, Okla., is to be built west into undeveloped coal fields, and another branch is now under construction from Texhoma south to Amarillo, Tex., 90 miles. Franklin A. Umsted is Pres., Texhoma, Okla.; W. R. Evans is Vice-Pres., Lamar, Colo.

GULF COAST & PROVIDENT CITY.—We are officially informed that contract has been awarded to C. L. DWYER, Houston, Tex., for building this railway from Pierce, Tex., to Provident City and Hallettsville, 60 miles. Surveys are made and right-of-way obtained. Emil Reinbold is Pres., Kansas City; Carey Shaw is Vice-Pres., Houston, Tex.; Schlafli & Porter are Engrs., Houston. Fully noted on Jan. 27.

MEMPHIS, PARIS & GULF.—An extension will be built to Helena, Ark., and eventually to Memphis, Tenn. The railroad will be extended from Ashdown, Ark., via Richmond, Ark., to Clarksville and Greenville, Tex. H. C. McCluer is Ch. Engr., Nashville, Ark. Noted on Dec. 23, 1909.

MISSOURI, KANSAS & TEXAS.—Plans are reported to have been adopted for double-tracking the main line betwen Dallas, Tex., and Parsons, Kan., 380 miles. Extensions will also be built in Texas from time to time, but plans for this work have not yet been definitely decided upon. S. B. Fisher is Ch. Engr., St. Louis, Mo.; F. Ringer is Prin. Asst. Engr., Parsons, Kan.

MOOREFIELD & VIRGINIA.—Chartered in West Virginia, with headquarters at Moorfield, W. Va., to build from Moorefield to Peru, Fort Seybert and Brandywine and to a point on the Virginia-West Virginia state line near Palo Alto, Va. The company has an authorized capital stock of $100,000. The incorporators are C. B. Welton, of Moorefield; Eugene E. Ailes, John J. Cornwell and W. B. Cornwell, of Romney, W. Va., and Milton E. Ailes, of Washington, D. C.

NORTHERN PACIFIC.—GUTHRIE & CO., of St. Paul, Minn., who have general contract for grading work on the line between Pingree and Wilton, N. Dak., have sublet portions of the work to EDWARD SWERINGEN, of New Salem, N. Dak., and JAMES TOBIN, of Seattle, Wash. The contracts call for the completion of the work by Oct. 1.

OSAGE & WESTERN.—Contract for grading this railway from Vinita, Okla., westward has been awarded to E. G. SPAULDING, of Wellston, Okla. Clarence Walters, Gen. Mgr., Muskogee, Okla., says that work will begin immediately. Survey is already under way. As noted on Oct. 28, '09, "the directors of this company have elected permanent officers as follows: R. H. Hoss, of Fairfax, Okla., Pres.; Clarence Walters, of Muskogee, Okla., Vice-Pres. and Gen. Mgr.; L. A. Wisemerour, of Fairfax, Secy.; C. E. Vandervoort, of Pawhuska; J. M. Moody, of Fairfax; C. E. Rush, of Tulsa, and Fred Balbruff, of Bliss, Directors. E. J. Noonan, of Muskogee, is Locating Engr. The company proposes to build from Pawhuska to some point on the Missouri, Kansas & Texas Ry. on the east, and then build from Pawhuska to Enid, Okla."

PANAMA R. R.—The Secretary of War has authorized the Panama R. R. Co. to enter into a contract with the Government of Panama for a preliminary survey for a railroad to connect the City of Panama with David, a city on the Pacific Coast in the province of Chiriqui. In general the route recommended by the Intercolonial Railroad Commission in 1893 will be followed, the distance being 274 miles. A committee appointed by the Government of Panama will arrange the details of the contract with a committee appointed by the President of the Panama R. R. The engineering force of the Panama R. R. Co. will be utilized in this work, and, if necessary, it will be expanded in order to carry on the surveys. F. C. Boggs is Gen. Pur. Agent, Washington, D. C. T. H. Rossbottom is Secy. and Asst. to Vice-Pres., 24 State St., New York City.

SACRAMENTO & SIERRA.—Surveys have been completed and practically all right-of-way secured, according to F. A. Warner, Gen. Mgr. Officially noted on Jan. 20. This company plans to build a railway to connect Sacramento, Cal., and Lake Tahoe, 110 miles. J. M. Graham is Ch. Engr., Sacramento.

SALT LAKE & IDAHO.—Articles of incorporation for the Salt Lake & Idaho R. R. Co. have been filed in Utah with the Secretary of State. The company proposes to build a line from Saline, on the Lucin cut-off, north through Kelton, and pass down Raft River Valley to Minidoka, Idaho. This line will connect the Southern Pacific, the Minidoka & Southwestern and the Oregon Short Line through the Twin Falls district in Idaho. The total length of the new road is estimated at 150 miles. The capital stock of the company is fixed at $160,000, of which W. H. Bancroft subscribes the major part, as trustee, while J. M. Davis, D. E. Burley, P. L. Williams and F. H. Knickerbocker each hold one share as an incorporator. See Central Idaho R. R.

SIOUX FALLS & WESTERN.—Incorporated in South Dakota, with $1,000,000 capital. Headquarters are at Sioux Falls, S. Dak. The line will run from Sioux Falls west to Wheeler, about 125 miles. The incorporators include R. F. Brown, S. Fantle, G. B. Tuthill, F. H. Hollister and G. T. Blackman, all of Sioux Falls. Estimated cost, $3,000,000.

TORRES, PRIETAS & REPRESO RY.—An extension is to be built, about 100 miles long, westward from Prietas, State of Senora, Mexico, to a connection with the Yaqui River line of the Southern Pacific Ry. Mrs. F. H. Seymour, Torres, Sonora, is the owner of this railroad, which connects with the Sonora line of the Southern Pacific Co. at Torres.

WABASH-PITTSBURG TERMINAL RY.—See West Side Belt R. R.

WASIOTO & BLACK MOUNTAIN.—The CALLAHAN CONSTRUCTION CO., of Knoxville, Tenn., has been awarded an additional contract for a further extension of the Wasioto & Black Mountain R. R. from Harlan, Ky., in a northeasterly direction along the mountains for a distance of about 27 miles. This is in addition to the contract of 24 miles this company has already under construction for the Wasioto & Black Mountain R. R., from Pineville to Harlan, Ky., as noted on Feb. 17. E. R. Keller is Gen. Supt. for the Callahan Co., at Pineville, Ky.

WEST SIDE BELT R. R.—Henry W. McMaster and F. H. Skelding, Receivers, Pittsburg, have been authorized by the U. S. Circuit Court to spend $25,000 for improvements. Of the amount to be expended, $15,000 will be applied to additional yard tracks, at Clairton, and $10,000 for the purchase of a second-hand passenger engine, two second-hand passenger coaches, and a second-hand combination baggage car and coach. The West Side Belt R. R. is operated for freight service only from Pittsburg to West Liberty, Castle Shannon, Smithburg, Longview, Bruceton, Large and Clairton, Pa., 20 miles.

WESTERN MARYLAND.—Contracts for the construction of the extension from Cumberland, Md., to Connellsville, Pa., have been awarded to the CARTER CONSTRUCTION CO., of Pittsburg, which was the lowest bidder. Bids for the construction of this extension were invited in three sections and it was expected that the contracts would be awarded to several different concerns in order to facilitate its completion as it is desired to have the new line in operation as soon as possible. The line is to be 83 miles in length and will give the Western Maryland Ry. entrance into Pittsburg over the Pittsburg & Lake Erie R. R., with which it has a 99-year traffic agreement. The new line will cost about $12,500,000 to construct and equip. Noted on March 24.

WHITE PASS & YUKON ROUTE.—This line, connecting White Horse and Skaguay, Alaska, 110 miles, will build a 5-mile extension this spring. A. L. Berdoe is Gen. Mgr., Vancouver, B. C.; Herman Weig is Agent, 1016 Chamber of Commerce Bldg., Chicago.

ELECTRIC RAILWAYS.

BANGOR, ME.—We are officially advised that date is indefinite for beginning construction on the proposed line of the Eastern Traction Co. The Railroad Commissioners of Maine have taken under advisement the petition of the company for an extension of its charter. The route of the proposed railway is from Bangor to Dexter, Stetson, Exeter, Garland, Hermon and Levant, all in Penobscot County. Capital stock authorized, $500.000. H. F. Bailey, Old Town, Me., is Pres.; F. J. Dow, Bangor, Vice-Pres.; F. J. Martin, Bangor, Secy.; E. B. Weeks, Old Town, Treas.

RUTLAND, VT.—The Rutland Railway, Light & Power Co., it is stated, will build an extension from Fairhaven to Poultney, Vt. The work will be done by the company's forces. There will be seven miles of single track. The work requires 100,000 cu. yds. of earth excavation, 10,000 cu. yds. of rock excavation, 500 cu. yds. of concrete masonry, 500 cu. yds. of stone masonry and two girder 50 ft. steel bridges. J. Loftus is Ch. Engr. Noted on March 31.

NEW YORK, N. Y.—Judge Lacombe, in an order handed down last week, authorized the receivers of the Metropolitan Street Railway Co., to spend approximately $510,000 for the purpose of restoring the Eighth Avenue Railroad Co., a leased line, to a state of "good working order, condition, and repair." F. C. Nordsick is Pur. Agent, Metropolitan St. Ry. Co., 820 Eighth Ave.

BOLIVAR, N. Y.—The Southwestern New York Traction Co., with principal office in Bolivar, and a capital of $200,000, has been incorporated to operate an electric street surface railway, 20 miles long, from Bolivar to Wellsville, in Allegheny County. The directors include Charles M. Van Curen and Albert J. Matson, of Bolivar; Benj. F. Patterson, of New York City, and Jas. G. Pugh, of Baltimore, Md. As noted on Feb. 10, the Bolivar & Wellsville Ry. Co. has been incorporated in New York to build an electric railway, 19 miles long, from Bolivar to Wellsville. Franchises have been applied for in the towns through which the line will pass. Incorporators are Benjamin F. Patterson, of Brooklyn; C. M. Van Curen and A. J. Matson, of Bolivar. Noted on Feb. 3.

ALTOONA, PA.—The Mayor has approved the ordinance granting a free franchise for 65 years to the Johnstown & Altoona Railway Co., which is to build a line between Altoona and Johnstown. All the right-of-way has been obtained and work will begin shortly. Noted on Jan. 6. As noted on Aug. 19, 1909, the Johnstown & Gallitzin Ry. Co. (the Johnstown & Altoona Ry. Co., successor), "has been chartered to construct an electric railway to connect Johnstown, Dale, Walnut Grove, Geistown, Elkton, Salix, Lovett, St. Michaels, South Fork, Summerhill, Wilmore, Portage, Lilly and Gallitzin, a distance of 32 miles. Capital stock authorized, $200,000; issued, $70,000. Wallace Sherbine is Pres.; Allan Sherbine, Secy.; H. W. Storey, Treas.; G. U. G. Holman, Gen. Mgr. and Elec. Engr., with headquarters in the Suppes Bldg., Johnstown."

LEECHBURG, PA.—The Pittsburg & Allegheny Valley Railway Co. will advertise for bids for the construction of the road from New Kensington to Leechburg about May 1, it is stated. When this line is completed it will give a connection on trolley from Apollo to Pittsburg, by transferring at New Kensington. Noted on March 31.

PITTSBURG, PA.—Officials of the West Penn Railways Co. have announced that plans have been completed for the building of a branch line from Greensburg to the Jamison coke works and thence to Latrobe, a distance of ten miles. The West Newton and Hunter line will be built during the coming summer. Nearly all the right-of-way has been secured. The line will be 20 miles long. J. L. Fritsch is Ch. Civil Engr., Connellsville, Pa. Noted on April 7.

SLIPPERY ROCK, PA.—S. L. McClure, Gen. Mgr., of the Slippery Rock & Grove City St. Ry. Co., Grove City, Pa., advises us that contracts will be let April 20 for constructing this line from Slippery Rock to Grove City, nine miles. Surveys are made and right-of-way secured. H. B. Graves is Ch. Engr., Butler Pa. Noted on Jan. 27.

OAKLAND, MD.—The Garrett County Ry. will be chartered to build an electric railway from Oakland to Mountain Lake Park, Deer Park, Accident, Grantsville and Frostburg, Md., with branches from Accident to Friendsville, and from Grantsville to the Pennsylvania state boundary. The incorporators are G. J. Gugey, Henry M. Speicher, George Padgett, W. Ravenscroft and Charles Lighthiser.

MORGANTOWN, W. VA.—H. R. Warfield, owner of the Sabraton Ry. Co., Morgantown, advises us that contracts will not be let for the proposed 2-mile extension from South Sabraton to Dellslow, W. Va. Right-of-way and capital are obtained and survey made. Noted on March 3.

BUCKHANNON, W. VA.—The Buckhannon & Clarksburg Electric Railway Co. has been chartered to build an electric railway from Buckhannon via Weston to Clarksburg, W. Va., about 35 miles. Capital, $250,000. The incorporators are E. W. Martin, G. O. Young, R. I. Perine, W. H. Fisher and U. G. Young, all of Buckhannon, W. Va. Preliminary survey will be made at once.

MIDDLEBOURNE, W. VA.—The Middle Island R. R. Co. has been incorporated in West Virginia to build an electric railway from Clarksburg to Salem, Middlebourne, Shirley, Center Point, McElroy Creek, and Sistersville. Capital stock, $5,000. Incorpororators: T. Moore Jackson and C. P. Stout, of Clarksburg; L. M. Underwood, John F. Shore and T. P. Hill, of Middlebourne.

BREMEN, IND.—Omar E. Neff, of Milford, Ind., has announced that he is interested in a project to build an electric line from Bremen to Mishawaka, and that work on the line will be commenced within the next few weeks.

KOKOMO, IND.—The Kokomo, Marion & Western Traction Co. plans an extension from Kokomo to Frankfort, Ind., and possibly to Terra Haute. T. C. McReynolds is Mgr., and P. H. Palmer is Ch. Engr., at Kokomo.

MICHIGAN CITY, IND.—The Chicago, Lake Shore & South Bend Ry. Co. may construct an extension from South Bend to Elkhart, Ind., this summer. C. N. Wilcoxon is Gen. Mgr., Michigan City.

HAMMOND, IND.—The Hammond, Whiting & East Chicago Elec. Ry. Co. will build an extension between Hammond and Harvey, Ill. A. L. Drum & Co., 125 Monroe St., Chicago, Engrs.

CHICAGO, ILL.—The Eastern Illinois Ry. Co. has been incorporated in Illinois to build a 16-mile railway from West Hammond to Riverdale through Harvey. When completed the line will connect at East Hammond with the Hammond, Whiting & East Chicago Elec. Ry., and at Riverdale with an extension of the Calumet & South Chicago Ry., which extension is yet to be built. Nominal incorporators: Warner H. Robinson, Edgar H. Pank and Samuel Blumenthal, of Chicago, and John Cox, of Joliet. Right-of-way has been practically secured and franchise negotiations are under way. Capital, $1,000,000. Principal offices, Chicago.

ALTAMONT, KAN.—The Kansas Union Traction Co., it is announced, will commence engineering work soon on its proposed line. As noted on Dec. 23, 1909, this railway will connect Parsons and Coffeyville via Columbus, Oswego, Altamont, Mound Valley and Cherryvale, 90 miles. Repair shops and the power station will be located at Altamont. Company plans to furnish current for light, heat and power purposes. Capital stock authorized, $1,000,000; issued, $500,500. William J. Jones, Altamont, is Pres.; Philip Strack, 23 Postal Telegraph Bldg., Indianapolis, Ind., Vice-Pres.; Barney McDaniel, Altamont, Secy.; C. N. Petty, Altamont, Treas. Archer, Rollins & Co., Kansas City, Mo., are Electrical Engrs. Noted on Aug. 26, 1909.

SHAWNEE, KAN.—The Kansas City, Lawrence & Topeka Ry. Co., has awarded contract, it is said, to the **GUILFORD CO.**, Kansas City, Mo., for building six miles of line from the present terminal at Shawnee, Kan., southwest to Zarah. Graham Hughes is Ch. Engr., K. C., L. & T. Ry. Co., Rialto Bldg., St. Louis.

YANKTON, S. DAK.—Articles of incorporation have been filed for the Iowa & Dakota Interurban R. R. Co., with headquarters at Yankton, and capital of $500,000. The board of directors is composed of B. E. Wells K. E. Bamford and H. E. Valentine, of Centerville; L. F. Phillips and W. G. Kirkpatrick, of Wagner; and Albert Amundson, of Lake Andes, all in South Dakota. The company proposes to build a line from Sioux City, Iowa, to Mitchell, a distance of 125 miles at an estimated cost of $20,000 a mile. It will cross the counties of Woodbury and Plymouth, in Iowa; and Union, Clay, Turner, Yankton, Hutchinson, Hanson and Davison in South Dakota.

BILLINGS, MONT.—We are officially advised that surveys are being made for the Eastern Montana Electric Ry. and that right-of-way will be secured upon completion of survey. Capital has been obtained. This railway will be 87½ miles long, extending from Billings to Red Lodge, Mont. F. A. Kesselhuth is Ch. Engr., Billings. Daniel D. Gile is Vice-Pres., Room 1006, 27 William St., New York. Noted on Feb. 10.

BRYAN, TEX.—The incorporators of the Bryan & College Interurban R. R. Co. are W. H. Hunter, of Crowley, La.; O. E. Gammill, W. E. Saunders, J. K. Parker, G. S. Parker, H. O. Boatwright, J. W. Doremus, J. E. Butler, J. T. Maloney, J. W. English, L. L. McInnis and A. W. Wilkerson, of Bryan. Work is now under way. Noted on March 31.

HOUSTON, TEX.—The Penn City Terminal Co., of Houston, is preparing to build an interurban railway between this city and Penn City, where extensive industrial plants are situated. The proposed road will be about ten miles long, and will be operated either by electricity or gasoline motors. Judge John G. Tod, of Houston, attorney for the company, has been attending to the preliminary details looking to the early construction of the road.

DENTON, TEX.—The Denton & Fort Worth Interurban Ry. Co., which proposes to build an electric line to connect the cities named in its title, has elected the following directors and officers: A. C. Owsley, Pres.; W. B. McClurkan, Vice-Pres.; H. F. Schweer, Treas., and C. E. Scruggs, Secy. Directors: A. C. Owsley, J. C. Colt, B. H. Davenport, U. B. McClurkan, J. N. Rayzor and B. W. Blewett.

GREENVILLE, TEX.—The Eastern Traction Co. has been granted a charter to build an interurban railway operated by any motive power except steam from Greenville to Wolfe City, about 20 miles. Capital, $12,000. The organization is not yet completed, but the line may be extended, if desired, to Bonham, Denison, Honey Grove, Paris, Cooper, Clarksville, Dallas, Plano, Chisholm, or Forney, Tex. Headquarters will be at Greenville. The incorporators are Joseph F. Nichols, R. N. White, L. N. Byrd, S. B. Perkins, Glen A. Coulson, W. M. McBride and J. B. Murphy, of Greenville; J. H. Blocker, H. E. Vaughan, H. C. Tittsworth, J. Riley Green and J. H. Myrick, of Wolfe City, Tex. Jos. F. Nichols is Secy.

MONTESANO, WASH.—We are officially informed that the Grays Harbor & Interurban Ry. Co. has made surveys and secured necessary capital for building its line from Grays Harbor to Puget Sound, 80 miles. Right-of-way is not secured. A. L. Paine is Pres., Hoquiam, Wash.; J. M. Clapp is Ch. Engr., Seattle, Wash. Noted on Feb. 10.

VACAVILLE, CAL.—The City Trustees have granted the Vallejo & Northern R. R. Co., of Vallejo, a franchise to build an electric railway over certain streets in Vacaville. This projected railway will connect Vallejo, Cordelia, Suisun, Vacaville and Sacramento. Noted fully on March 3, under Sacramento.

LIGHT AND POWER PLANTS.

(** denotes that this work is advertised in Engineering News.*)

BOSTON, MASS.—Contract for installing the electric system in the Abraham Lincoln School has been awarded to **EDWIN C. LEWIS, Inc.**, 121 Federal St., at $11,108.

PITTSFIELD, MASS.—The directors of the Pittsfield Electric Co. have awarded to **STONE & WEBSTER**, 147 Milk St., Boston, contract for the enlargement of the power plant at Silver Lake. It is proposed to expend between $125,000 and $150,000, and the capacity of the company's plant will be doubled. New equipment includes a 750-KW. generator and boiler. Work will be started at once.

BRIDGEPORT, CONN.—The Connecticut Co. contemplates increasing the output of its power plant here to 5,000 KW. This company operates the street railway system owned by the New York, New Haven & Hartford R. R. Co. in the southern part of Connecticut. C. H. Chapman is Supt.

EAST HARTFORD, CONN.—The Commissioners of the Fire District have signed a 5-year contract with the **HARTFORD ELECTRIC LIGHT CO.** for the lighting of the streets of the district. The contract calls for Tungsten lamps of 100 candle power at $17.50 per lamp per year.

***NEW YORK, N. Y.**—Bids will be received by the Board of Water Supply until 11 a. m., April 26, for Contract U, for furnishing and delivering four 100-HP. and one 150-HP. boilers. John A. Bensel is Pres.

ALTOONA, PA.—The City Council has awarded to the **PENN CENTRAL LIGHT & POWER CO.** contract for street lighting for a period of ten years, beginning April 4, under the terms of which the company is to replace the present lamps with metallic flame arc lamps, of which at least 125 must be installed within six months.

WOODVILLE, PA.—Bids are asked by R. J. Cunningham, County Controller, Pittsburg, until noon, April 20, for the construction of a power-house for the Allegheny County House, Woodville.

WEST FINLEY, PA.—Plans have been completed for the construction of a large pump station by the Natural Gas Co. on land purchased from the George Gray farm about one mile from this place. Work will be started at once on the project.

PHILADELPHIA, PA.—Bids are asked by the Bureau of Yards and Docks, Navy Dept., Washington, D. C., until 11 a. m., May 7, for condensers, fire pump, feed-water heater and piping. R. C. Hollyday is Ch. Bureau. Specifications are on file at the office of Engineering News, New York.

COLUMBUS, GA.—The **SULLIVAN MACHINERY CO.**, Railway Exchange, Chicago, Ill., has been awarded contract by Stone & Webster, of Boston, Mass., for making test borings at the proposed site of the dam to exactly determine the location and character of suitable rock for the foundations, with Sullivan diamond prospecting core drills. This contract was erroneously noted on March 31 as awarded to the Sullivan Machine Co. for constructing foundations of the dam.

WASHINGTON, GA.—The Washington Lumber & Power Co., lately incorporated with a capital stock of $50,000, has purchased a site on Liberty St., on which to erect an electric power plant, planing mill, dry kiln, shops and storage room, the power plant to furnish electricity to operate the machinery in the buildings and also for commercial purposes here. P. J. Holliday is interested.

WAYCROSS, GA.—The Ware County Light & Power Co. has awarded contract to the **ALLIS-CHALMERS CO.**, of Milwaukee, Wis., for new equipment for its plant, to include two 18-in. × 24-in., single-tandem gas engines, each direct connected to a 250-KVA., 3-phase, 60-cycle, 2,300-volts, 200 r. p. m. alternator. A motor generator set and two direct-current generators driven by small gas engines will provide for excitation and an induction motor will drive an air compressor. Gas will be supplied by producers.

GUNTERSVILLE, ALA.—The Guntersville Realty Co. will soon award contracts for the construction of an electric light and power plant. Estimated cost, about $10,000. W. J. Wilson, of Guntersville, is Engr.

DADEVILLE, ALA.—The Russell Mfg. Co. is negotiating with John W. Pace for the purchase of water rights owned by him on Big Sandy Creek, nine miles south of here. The promoters proposed to develop the water power to generate electricity, to be transmitted to Alexander City, about eleven miles distant, for manufacturing purposes.

LAKE CHARLES, LA.—The Kinder Ice, Light & Water Co. has been organized for the purpose of erecting an electric light and power plant and other public utilities here. Paul O. Moss, of Lake Charles, is Pres. The company has a capital stock of $25,000.

MARTINS FERRY, OHIO.—The City Council has voted to issue $18,000 of bonds for improvements to the municipal electric light plant.

AKRON, OHIO.—The Quaker Oats Co. has awarded contract to the **ALLIS-CHALMERS CO.**, of Milwaukee, Wis., for the remainder of motor equipment for its new cereal factory being erected here. The contract includes 19 squirrel-cage induction motors, ranging in size from 10 HP. to 75 HP.

The Northern Ohio Traction & Light Co. is planning to construct a 7,500-HP. plant at a cost of $1,500,000, to take the place of its present power houses at Bedford, Cuyahoga Falls, Akron, Canton and Midvale. W. H. Douglass is Gen. Supt.

COLUMBUS, OHIO.—Contracts have been awarded for equipment for the Spring St. power plant of the Columbus Railway & Light Co., as follows: To **THE JEFFREY MFG. CO.**, of Columbus, Ohio, for structural steel work for the new plant and for coal and ash handling machinery; the **ALLIS-CHALMERS CO.**, of Milwaukee, Wis., for turbo-generators with a rating of 4,000 KW., condensers to the **WORTHINGTON PUMP CO.**, of New York; for boilers, to the **BABCOCK & WILCOX CO.**, 85 Liberty St., New York; the **GREEN FUEL ECONOMIZER**, of Chicago, Ill., for inducted draft fan apparatus and automatic stokers. Estimated cost, about $200,000.

CONNERSVILLE, IND.—The Connersville Light, Heat & Power Co. is preparing to ask for bids for enlarging and remodeling the plant. Some new machinery will be installed. Charles P. Stauffer is Secy.

LOGANSPORT, IND.—S. A. Vahn, W. T. Giffe, Capt. W. H. Snider and others have secured a franchise to construct, equip and operate a central station heating plant. Bids will be asked in a few weeks.

INDIANAPOLIS, IND.—The Circle Merchants' Association has decided to place a special lighting system around Monument Sq., to consist of a number of 640-c. p. arc lamps, six to the square. R. E. Gregg, Hubert Keller and Norman Perry have charge of the matter and will decide upon the type of lamp to be used.

STERLING, ILL.—Announcement is made here that the U. S. Government dam across Rock River is to be hydroelectrically equipped immediately and will develop 9,000 HP.

GREEN BAY, WIS.—Contract for electric fixtures for the court-house has been awarded to the **MORREAN GAS FIXTURE CO.**, of Cleveland, Ohio, at $3,000.

WAUKESHA, WIS.—The Waukesha Lime & Cement Co. has awarded contract to the **ALLIS-CHALMERS CO.**, of Milwaukee, Wis., for equipment for its plant, which includes one Gates breaker, two Gates elevators and four 3-phase, 60-cycle, 400-volt, squirrel cage, induction motors varying in size from 30 HP. to 150 HP.

SIGOURNEY, IOWA.—On March 28 the citizens voted to grant a franchise to J. F. Bray to construct and operate an electric light plant here.

DAVENPORT, IOWA.—The Tri-City Ry. & Light Co., Davenport, has let contract to the **WESTINGHOUSE ELECTRIC & MFG. CO.**, 171 La Salle St., Chicago, Ill., for the installation of a 12,000-HP. turbo-generator at its power plant in Moline.

FORT RILEY, KAN.—See item under Buildings.

LITTLE ROCK, ARK.—The **FORT WAYNE ELECTRIC WORKS**, of Fort Wayne, Ind., has secured contract for the equipment of the municipal electric light plant at $39,500, plant to have sufficient output to provide for 1,000 lamps. The street lighting system will utilize 500 lamps.

ALTUS, OKLA.—The City Council has engaged the J. W. Maxcy Engineering & Construction Co., Houston, Tex., to take charge of the work in connection with improvements to the water and sewer systems and electric light and power plant. Estimated total cost, $135,000; of extensions to the electric plant, $35,000.

POTEAU, OKLA.—Plans have been prepared by H. R. Nichol, Engr., of Muskogee, Okla., for an electric light, water-works and ice plant for the Poteau Electric Light & Ice Co. Estimated cost, $15,000.

SANTA RITA, N. MEX.—The Chino Copper Co. has filed an appilcation in the office of the Territorial Engineer at Santa Fe for the use of the water from Apache Tejo Spring, near Santa Rita, Grant County, for the operation of a hydroelectric plant that it will erect. It is stated that the proposed plant will cost about $250,000, and will furnish power for operating the machinery of the company's mines and reduction plant.

SILVER CITY, N. MEX.—The Black Range Reduction Works has adopted plans for the erection of a hydroelectric plant on the Gila River, near its mines. The proposed plant will afford power for operating the machinery of the company's property.

TENINO, WASH.—The Tenino Light & Power Co. is preparing to begin work on a $200,000 power plant on the Skookumchuck River this spring. S. W. Fenton, of Tenino, is Pres.

MEDFORD, ORE.—J. R. Anderson has applied for a franchise to erect a gas plant. Work will start at once if it is granted. Tanks and pipes to cost $100,000 will be installed the first six months.

BANNING, CAL.—See item under Water Supply—Irirgation.

LONG BEACH, CAL.—The Southern California Edison Co. has secured all the property necessary in this city on the inner harbor for its proposed power plant, work on which will begin as soon as possible. The company proposes to spend $2,000,000 on the initial equipment and will eventually expend $8,000,000. The plant will ultimately have an output of 250,000 HP.

MARYSVILLE, CAL.—Notice of appropriation of two water rights has been filed by Newton C. Cleveland, of the Yuba Consolidated Goldfields Co. The claims call for 20,000 ins. of water in Yuba River, opposite Da Guerre Point, for generating electricity, irrigation, industrial and agricultural purposes. The water is to be diverted by a dam, thence to ditches, flumes and pipes.

COLUSA, CAL.—Surveys are being made by the Pacific Gas & Electric Co. for a route for a new pole line from Marysville to Meridian, thence to Colusa. The wires will carry 60,000 volts and will furnish electricity for the Northern Electric Ry. and for lamps in this city. The town will be rewired.

SAN JACINTO, CAL.—The Ramona Power & Irrigation Co. on March 23 filed articles of incorporation with the County Clerk. The company is organized to erect, maintain and operate water and steam power plants for generating electricity for power and light purposes. Capital, $10,000. T. S. Ingham, of Highland, Cal., is interested.

GRANGEVILLE, IDAHO.—The City Council has granted Walter H. Hill a 30-year franchise to construct and operate an electric light and power system here. A power plant on the Clearwater River, five miles distant, will be erected. Estimated coct, about $100,000.

VOLLMER, IDAHO.—Plans are being perfected for the organization of the Craig Power Co., of Vollmer, with a capital stock of $50,000. The company has acquired a power site on Lawyer's Canyon Creek, above the railroad bridge, and will be able to generate 500-HP. W. J. Ramoy, of Vollmer, is interested.

BELLEVILLE, ONT.—James G. Lindsay, City Engr., has recommended to the City Council the installation of two turbine pumps and two 85-HP. motors at the water-works. Estimated cost, $5,000.

PETERBORO, ONT.—The proposed extension to the plant of the Canadian General Electric Co. will be built in Peterboro. This was decided at a joint meeting of the City Council and Water Commissioners on April 6, when the company's offer was accepted. The company will expend $250,000, and will erect a power-house at the new water-works dam to generate the power for their own purposes and pay the city $2,000 a year for the power. At the end of 2[illegible] years the Canadian General Electric Co. [illegible] hand over the plant to the city with[illegible] payment.

CALGARY, ALTA.—An e[illegible] has been prepared for extensions a[illegible] improvements to the municipal electric li[illegible] plant, to cost about $70,000 and includes [illegible]74 lbs. of weatherproof wire, at $15,5[illegible] [illegible]0 poles, at $2,169; 2,600 crossarms, at [illegible]0; rubber-covered wire, porcelain tubes, [illegible] lamp sockets, sundries, etc., at $5,621; [illegible], various sizes, $12,000; transformers, [illegible]ious sizes, $10,280; 100 arc lamps an[illegible] [illegible]ion transformers and equipment, $7,[illegible].

Plans have been completed [illegible] T. Childs, City Engr., for the municipal [illegible]tric-light and power plant. The com[illegible]ners have decided to recommend to the Council a by-law covering the cost [illegible] submitted to the ratepayers. The pro[illegible] plant will have an output of 2,000 HP[illegible] provision will be made to increase it [illegible] 4,000 HP. when needed. Estimated cost [illegible]5,000.

EL TIGRE, MEX.—The El [illegible]re Mining Co. will install an electric pow[illegible] plant here for the purpose of furnishi[illegible] power for operating the machinery of [illegible] mines and mill.

VERGEL, MEX.—The Tez[illegible]n Copper Mining & Smelting Co. has ob[illegible]d a concession from the Federal Go[illegible]ment for the erection of a hydroelectric [illegible] on the Sola River, near here. The pr[illegible]sed plant will have a capacity of 1,4[illegible] HP., which will be used to operate the ma[illegible]ry of the mines and mill of the company.

PACHUCA, MEX.—The new [illegible]nsmission lines which the Mexican Light & Power Co. is constructing to Pachuca bran[illegible] off from the Necaxa-Mexico City transmi[illegible]n line at a point about seven miles from Tulancingo and will run from that point d[illegible]t to Pachuca. It will consist of two circuits of three copper cables each. Steel towers upon which the cables will be placed are now being erected. In addition to furnishing power for a number of mines in the Pachuca district, the company will also furnish the Compania de Luz y Fuerza of Tulancingo, State of Hidalgo, with power to augment its present service in that town and district.

ALAMOS, MEX.—It is reported that the plans for the hydroelectric plant that the Mayo River Power & Land Co. will erect on the Mayo River at San Bernardo, Alamos district, have been approved by the officers of that company, and the order has been given for the construction work to be started. The principal offices of the company are in Denver, Colo.

BRIDGES.

(** denotes that this work is advertised in Engineering News.*)

WATERBURY, CONN.—R. A. Cairns, City Engr., has been authorized to prepare plans for the construction of a bridge over Sled Hall brook.

SAYBROOK, CONN.—Bids for constructing the superstructure of the proposed Saybrook Bridge will be received in May or early June by the Saybrook and Lyme Bridge Commission. Edward W. Bush is Ch. Engr.

WOODSIDE, N. J.—The Assembly, it is reported has passed the bill authorizing the construction of a bridge over the Passaic River connecting Woodside and Arlington. Estimated cost, $600,000.

CAPE MAY, N. J.—Contract for constructing the steel bridge at Schellingers Landing has been awarded by the Board of Chosen Freeholders of Cape May County to **R. E. HAND** and **HARRY HOFFMAN** at $9,859.

PHILADELPHIA, PA.—Bids will be received by W. Hunter, Ch. Engr. Philadelphia & Reading Ry. Co., 520 Reading Terminal, until noon, April 19, for Contract 47, signal bridges, Green and Norris Sts. and 17th and Indiana Sts. to Richmond Branch.

STROUDSBURG, PA.—Bids are asked by the County Commissioners until 11 a. m., May 2, for the erection of two double-arch stone bridges, one over McMichael's Creek at Kellersville, the other over Pocono Creek at Tannersville, both in Monroe County. Joseph Overfield is Clk.

WILKES-BARRE, PA.—The Schofield Engineering Co., Arcade Bldg., are preparing plans for a 9-span bridge, 2,600 ft. long, over the Susquehanna River, at Wilkes-Barre, for the Board of Commissioners of Luzerne County. Estimated cost $225,000. Separate estimates will be received in about 30 days on steel superstructure and concrete substructure and viaduct work.

BALTIMORE, MD.—Bids are asked until 11 a. m., April 20, by the Board of Awards, care of J. Sewell Thomas, City Register, for a steel bridge on Franklin Road over Gwynn's Falls.

ROANOKE, VA.—Bids will be received by the Wasena Land Co., P. S. Miller, Pres., until April 16 for the construction of a bridge.

ELKINS, W. VA.—Bids are asked by Randolph County, until May 6 for the construction of a bridge over Cheat River. F. A. Rowan is Clk., County Court.

WINSTON-SALEM, N. C.—The Forsyth County Commissioners have decided to construct a steel bridge across the Yadkin River.

ATLANTA, GA.—The Louisville & Nashville R. R., W. H. Courtney, Ch. Engr., Louisville, Ky.; Atlanta & West Point R. R., C. A. Wickersham, Gen. Mgr., Atlanta & Georgia R. R., Thomas K. Scott, Gen. Mgr., Augusta, Ga., will construct a viaduct along the entire length of the south side of freight depot, so as to be on level with the third floor of structure. The roadway is to be 800 ft. long and 35 ft. wide. Estimated cost, $50,000.

TALLADEGA, ALA.—We are officially advised that the **ROANOKE BRIDGE CO.** of Roanoke, Va., has been awarded contract at $4,250 by Talladega County for the construction of a steel bridge over Choccolocco Creek at Jackson's Shoals. J. E. Camp is Judge Probate.

ELIZABETHTON, TENN.—The city has awarded contract, at $7,500, to the CONVERSE BRIDGE CO., of Chattanooga, Tenn., for constructing a 30-ft. steel bridge across Tow River.

CINCINNATI, OHIO.—Bids will be received until April 15 by the Board County Commissioners for constructing two concrete bridges, one on the Westchester Road, south of Cre[illegible]ville, and the other on the Shedd Road, [illegible] mile south of Blue Rock Pike, Colerain Township, as per specifications Nos. 19 and [illegible] respectively. Fred Oreihs is Clk.

NEWARK, OHIO.—Bids will be received by the Board of Commissioners of Licking County until 1 p. m., April 27, for the construction of the substructure and superstructure of the Utica bridge, on Homer Road over Northfork, Washington Township. Fred S. Cul[illegible] is County Surv.

McARTHUR, OHIO.—Bids will be received by the Board of Trustees of Brown Township until 2 p. m., April 18, for the construction of a stone bridge.

NEW PHILADELPHIA, OHIO.—Bids will be received by the Board of Commissioners of Tuscarawas County until 1 p. m., April 19, for the construction of three concrete culverts and two bridge abutments. W. C. Shott[illegible] County Audr.

TIPPECANOE CITY, OHIO.—H. E. Whitlock, County Engr., Troy, is preparing plans for a bridge over the Miami River, at Tippecanoe City. The structure will have three spans of 111 ft. each concrete piers and abutments. Alternate bids will be received on reinforced concrete construction. Bids will be received by the Board of Commissioners of Miami County, Troy, about May 1. Joseph Sinks, is County Audr.

EDENTON, OHIO.—Bids will be received until noon, May 2, for the construction of the substructure and superstructure of a bridge over Shuelick Creek on Zenia Road. J. L. Larkin, Batavia, is Audr., Clermont County.

DAYTON, OHIO.—Bids will be received until noon, April 22, by the Department of Public Service for a hand-power lift bridge, either bascule or straight-lift type, over the Miami and Erie Canal at Webster St., Dayton, Ohio. The bridge will be a skew bridge, about 50-ft. span, to be of steel construction, with wooden floor. Bidders are to file plans and specifications for same with their bids.

Plans are being prepared for the construction of a concrete steel bridge, Melan system, over the Great Miami River at Stewart St. The bridge will be of seven arches, approximately 650 ft. face to face of abutments, 60 ft. wide. It will be about a month before bids will be received upon this structure. J. C. Ely is Dir.

GREENCASTLE, IND.—The Commissioners of Putnam County will soon ask for bids for the construction of a steel bridge over Eel River near Wallace Junction.

INDIANAPOLIS, IND.—The Beech Grove Traction Co., has let a contract to JOHN McGREGGOR for the construction of a bridge over Bean Creek.

HAMMOND, IND.—The Lake County Council, Crown Point, has appropriated $75,000 for the construction of a bridge over the Calumet River, at Hohman St., Hammond.

DANVILLE, IND.—Bids will be received by the Board of Commissioners of Hendricks County until 10 a. m., April 19 for the construction of various bridges. William H. Nichols is County Audr.

LAPORTE, IND.—The Laporte County Commissioners have let to the ROCHESTER BRIDGE CO., Rochester, Minn., the contract for constructing the English Lake bridge, in the south end of the county, at $9,136.

*YPSILANTI, MICH.—The city will receive bids until noon, May 16, for the construction of a 3-arch reinforced concrete bridge over the Huron River, according to plans and specifications now on file in the office of S. Damon, City Clk. Length of bridge, 225 ft.; width over all 46 ft.

HIGHLAND PARK, ILL.—Bids will be received by the Board of Local Improvements until 8 p. m., April 21, for the construction of a reinforced concrete bridge, with 16-ft. roadway and 4½-ft. sidewalk on both sides. H. L. Bowen, is Comr.

OTTAWA, ILL.—Bids will be received by the Surveyor of LaSalle County until 1.30 p. m., April 16, for repairs to the steel bridge between Rutland and Dayton Townships.

STREATOR, ILL.—The lowest bid submitted to the city on April 4 for the construction of a bridge over the Vermillion River at Bridge St. was that of the Milwaukee Bridge Co. of Milwaukee, Wis., at $35,722. Ralph Modjeski, Chicago, Ill., is Engr.

MARSHALLTOWN, IOWA.—The Board of Supervisors of Marshall County is asking for bids for concrete arches as follows: Two 30-ft., two 50-ft., two 60-ft. and one 90-ft., bidders to furnish plans. E. Cornell is Clk. Bd., Marshalltown.

DES MOINES, IOWA.—We are officially advised that plans and specifications have been completed and filed with the City Council for a 6-span reinforced concrete bridge to be built over the Des Moines River at Walnut St.: Length of arches center to center, 75 ft.; width of roadway, 58.5 ft.; two sidewalks, each, 12 ft.; total length of bridge, 503 ft.; height of roadway above low water, 28 ft. The bridge is designed for heavy city traffic including double-track city railway. Estimated cost, $150,000 Designed by John W. Budd and W. D. Maxwell, Civil Engrs. John W. Budd is City Engr.

*MINNEAPOLIS, MINN.—We are officially advised that bids were received on March 31, by William Pierce Cowles, Consulting Engr., 925 New York Life Bldg., Minneapolis, for three reinforced concrete stone-faced bridges over waterways connecting lakes in the city. Contract has been awarded to the SECURITY BRIDGE CO. of Minneapolis, work to commence at once and to be completed by Sept. 1, 1910.

ST. PAUL, MINN.—The Board of County Commissioners have made a demand upon the Wisconsin Central Ry. Co., Minneapolis, Minn., to replace the present old wooden bridge across Arcade St., St. Paul, with a steel or concrete structure. E. G. Krahmer, is County Audr.

The Board of Park Commissioners, George T. Redington, Secy., have awarded the contract for the construction of a steel and concrete bridge over the Phalen Park Canal to JACOB LAUER, of St. Paul, at $10,474. The contract for grading Wheelock parkway was awarded to CHRIST JOHNSON, St. Paul, at $10,200.

WILLARD, KAN.—Bids will be received by the Board of Commissioners of Shawnee County, at the office of S. G. Zimmerman, County Clk., Topeka, until noon, April 22, for the construction of one 188-ft. steel span bridge on south end of bridge across the Kansas River, near Willard.

GRAND ISLAND, NEB.—The STANDARD BRIDGE CO., Omaha, Neb., has been awarded contract for the erection and construction of steel, wooden, pile and truss bridges to be built for this county for one year from March 28.

FREMONT, NEB.—The Supervisors of Dodge County and the Saunders County Commissioners on April 3 awarded contract to the STANDARD BRIDGE CO. of Omaha, Neb., for the construction of the new steel spans in the Platt River bridge. There will be three new 150-ft. spans, 16-ft. driveway.

BUTTE, MONT.—Plans for the new steel viaduct soon to be built by the Northern Pacific Ry. over Harrison Ave, have been accepted by the City Engineer's office and were returned to the company's engineers on April 1. Work on the viaduct will commence within the next 60 days in all probability. It will cost about $16,000 when completed and will provide a roadway 41 ft. in width on Harrison Ave. enlarging the present roadway by more than 10 ft. The abutments, one on each side, of the roadway, will support the viaduct, thus obviating the inconvenience of a divided roadway underneath.

ST. LOUIS, MO.—Bids will be received by the Board of Public Improvements about April 25, for the construction of the Kingshighway viaduct, at Kingshighway Boulevard, to be 1,856 ft. long, with 60-ft. roadway, two 14-ft. walks three main spans and twelve approach spans. W. B. Dryden is Secy. O. W. Childs is City Engr.

GAINESVILLE, TEX.—Gainesville, Oklahoma & Western R. R. Co., J. C. Whaley, Pres., will construct four steel bridges across Clear Creek, Elm Creek, Denton Creek and Red River.

FORT WORTH, TEX.—The City Commission is considering plans prepared by L. S. Leversedge, John B. Hawley and the City Engineer for a bridge across the Trinity River, connecting Fort Worth proper with North Fort Worth.

WEBBERS FALLS, OKLA.—The Board of Commissioners of Muskogee County, Muskogee, has let contract to the VINCENNES BRIDGE CO., Vincennes, Ind., at $4,750, for the construction of one 160-ft. steel bridge over Dirdnie Creek, near Webbers Falls. W. E. Looper is County Clk.

IRONDALE, WASH.—The Comrs. of Jefferson County at Port Townsend will soon let contract it is reported for constructing a bridge over Chimacum Creek, to connect Irondale and North Irondale. Estimated cost, $8,000.

LOS ANGELES, CAL.—The following bids have been opened for constructing a reinforced concrete bridge on Eagle Rock Road: J. T. Hall-Marvin Co., $19,700; William F. Bixby, $10,965; Mercereau Bridge & Construction Co., $11,250; Peterson & Schmidt, $11,500; California Ornamental Brick Co., $12,626; W. A. Dontauville, $14,470.

The WEBER-DULLER CO., Pacific Electric Bldg., has been awarded contract by the Pacific Electric R. R. Co., for constructing a reinforced concrete bridge, 410 ft. long, at $4.95 for each cu. yd. concrete in place, in abutments. Walls and footings same, $5.25 cu. yd. concrete in place in piers.

WINNEMUCCA, NEV.—Bids for the construction of a reinforced-concrete bridge across the Humboldt River and two reinforced concrete culverts near the above mentioned bridge all in the town of Winnemucca, Humboldt Co. will be received by the County Clerk, of the Board of County Commissioners until 2 p. m., May 3. Plans and specifications are on file. R. E. Trousdale, Clk.

BRANTFORD, ONT.—By-laws were carried on April 4 for the purpose of raising $55,000 for a new bridge over the canal at Market St. H. F. Leonard is City Clk.

BUILDINGS.

(* *denotes that this work is advertised in Engineering News.*)

FORT WILLIAMS (Cape Cottage post-office), ME.—We are officially advised that bids were received by Capt. C. F. Humphrey, Jr., Constr. Q. M., 655 Congress St., Portland, Me., until 10 a. m., April 2, for the construction, plumbing, heating and electric lighting of the following buildings at Fort Williams, Me.: (a) One administration building (brick); (b) one guardhouse (brick); (c) two sets of field officers' quarters (brick); (d) two double sets captains' quarters (concrete); (e) one double lieutenants' quarters (brick); (f) one bakery (brick); (g) one quartermaster's storehouse (brick): W. H. Keyes & Co., 95 Milk St., Boston, Mass., (a) $20,471, (b) $19,403, (c) $26,194, (d) $37,610, (e) $13,847, (f) $6,323, (g) $15,711; Norman H. Cook, Portland, Me., (a) $21,939, (b) $19,889, (c) $20,566, (d) $30,680, (e) $13,889, (f) $8,133, (g) $13,891; Kennedy & Peterson, 18 Cambria St., Boston, Mass., (a) $19,841, (b) $17,417, (c) $19,668, (d) $33,384, (e) $12,590, (f) $6,500, (g) $13,491; John W. Burrowes Co., Portland, Me., (a) $20,800, (b) $18,700, (c) $20,750, (d) $37,700, (e) $13,450, (f) $7,975, (g) $13,950; Mahoney Construction Co., Portland, Me., (a) $18,277, (b) $14,962, (c) $19,132, (d) $28,174, (e) $10,495, (f) $6,317, (g) $11,996; Charles E. Currier Co., 110 Summer St., Boston, Mass., (a) $22,231, (b) $18,048, (c) $21,386, (d) $32,794, (e) $14,021, (f) $6,885, (g) $15,561; Conners Bros. Co., Lowell, Mass., (a) $20,900, (b) $20,500; (c) $21,300, (d) $28,600, (e) $11,800, (f) $7,600, (g) $15,060; W. H. Fissell & Co., 1133 Broadway, New York, (a) $23,700, (b) $17,800, (c) $22,000, (d) $35,400, (e) $15,300, (f) $6,900, (g) $16,200.

PORTSMOUTH, N. H.—Bids are asked until 11 a. m., May 21, by the Bureau of Yards and Docks, Navy Dept., Washington, D. C., for rebuilding and fireproofing building No. 20, U. S. Navy Yard, Portsmouth.' Specifications are on file at the office of Engineering News, New York.

CAMBRIDGE, MASS.—A gymnasium, to cost $1,000,000, is to be built by Harvard University, according to local press reports. Tentative plans for the building have been submitted, and the general design has met with approval. The plans call for a 1-story structure, with an arched roof of steel and glass 65 ft. high, except where the administration offices will occupy a second story in the facade. The gymnasium proper is to be 292 × 96 ft., it is stated. The roof over this exercising hall will be 70 ft. from the floor. An outdoor track and handball and tennis courts are provided behind the starts and shot-put practice-room, which opens out of the exercise hall. Dr. A. L. Lowell is Pres.

BOSTON, MASS.—The work of razing the building at the corner of State and Broad Sts., recently purchased by S. Vorenberg, 67 Washington St., has been completed, and excavation has begun in preparation for the erection on the site of a 6-story business and office building which is to have all modern conveniences. The structure, which will be numbered 111 State St. and 3 Broad St., will cover an area of about 1,600 sq. ft., having a frontage of 40 ft. on each street. The exterior construction will be of granite, steel and glass for the first two stories and limestone above the second story. The interior finish, except for the corridors, will be oak, with maple floors. On the office floors the partitions will be of glass and oak. The first floor corridors are to be finished in marble, with mosaic floors, and the upper corridors in oak, with terazzo floors. The basement will be finished and have direct entrance from Broad St. The building is to cost about $45,000. It will be completed about Sept. 1. Arthur H. Bowditch, 7 Water St., is Arch.

BOSTON, MASS.—We are officially advised that F. W. Dean, Mill Engr. and Arch., 53 State St., Boston, Mass., has completed plans and specifications for a storehouse for the E. H. Clapp Rubber Co., of Boston, Mass. The building is to be approximately 100 × 116 ft., two stories, of slow-burning mill construction. The second floor is designed to carry a load of 500 lbs. per sq. ft. The columns are to be of wood, supporting steel beams running parallel with one side of the building. Wooden beams running across the building will be hung by brackets from the steel girders. In the second floor every other column will be omitted. The first floor is to be of concrete and the second floor of wood with finished floor of maple. The exterior walls will be carried above the roof line and the roof is pitched for inside drainage.

PROVIDENCE, R. I.—Miss Mary C. Wheeler, who conducts the school for girls on Cabot St., is planning to erect a brick school building on the lot of land at the corner of Hope and Meeting Sts. She has purchased the Jeffrey Hazard house on an adjoining lot and will move that house to Angell St. The plans spbmitted have been drawn by J. W. Sawtelle, 48 Custom House St. The building will front on Hope St., Providence, with a length of 135 ft., and one end will be on Meeting St. The building will be of red brick, of the early English style of architecture. It will be four stories high on one end and three on the other, this being due to the grade of the land. Cost, $85,000.

STORRS, CONN.—Bids will be received by Charles M. Jarvis, Chn. of the Building Com. for the Connecticut Agricultural College, until 10 a. m., April 20, for the construction of a temporary dining hall at Storrs. Plans and specifications may be procured of the committee or from the architect, C. S. Palmer, Meriden, Conn.

NEW YORK, N. Y.—Bids are asked by the Board of Water Supply, 299 Broadway, until 11 a. m., April 26, for Contract 81, for construction of four field office buildings and five horse sheds in the Croton, White Plains and Hill View Division of the Catskill Aqueduct, in the towns of Mount Pleasant and Greenburg and the city of Yonkers, Westchester County, N. Y.

Plans have been filed for a 12-story fireproof loft and store building to be erected for the Criterion Construction Co., L. Mantz, Pres., from designs by Rouse & Goldstone, Archs., 12 West 32d St., at 114 to 120 West 26th St. It is to be of brick, trimmed with limestone and terra cotta, with a frontage of 85.8 ft. and a depth of 85 ft., and an extension. It will cost $300,000.

James H. Cruikshank, 50 Pine St., will build an 8-story warehouse of ornamental brick, 60.11 × 70 ft., from designs filed by William H. Dewar, Arch., with R. E. Ross as associate, at 156 to 160 Leonard St. The cost is $125,000.

An item of $1,000,000 will be inserted in the Sundry Civil Appropriation Bill to cover an increase in the appropriation for the post-office at the Pennsylvania R. R. terminal in New York, to provide for increased mail-handling facilities. James Knox Taylor is Superv. Arch., Treasury Dept., Washington, D. C.

NEW YORK, N. Y.—Bids are asked by the Department of Public Charities until 2.30 p. m., April 18, for alterations and repairs to building located on the westerly end of Pier at the foot of East 26th St., the City of New York.

Bids are asked until 11 a. m., April 18, by C. B. J. Snyder, Supt. School Bldgs., Dept. of Education, New York, for alterations, repairs, etc., at Public Schools Nos. 24, 26, 36, 43, 52, 53, 55, 68, 74, 86 and 166, Boro. of Brooklyn; for alterations, repairs, etc., at Public Schools Nos. 1, 3, 8, 16, 21, 23, 29, 38, 41, 44, 106, 107, 108, 113 and 124, Boro. of Manhattan; for alterations, repairs, etc., at Bryant High School, and Public Schools Nos. 1, 2, 4, 13, 14, 17, 19, 20, 72 and 76, Boro. of Queens.

*FORT TERRY, N. Y.—Bids are asked by Capt. F. T. Arnold, Constr. Q. M., New London, Conn., until 10 a. m., May 13, for the construction, plumbing, heating, electric wiring and fixtures of one guardhouse, and one quartermaster's storehouse at Fort Terry, N. Y.

CORNWALL, N. Y.—Sebastian C. Jones, C. E., Supt. of the New York Military Academy at Cornwall, advises us that contracts have been let for four buildings, as follows, to replace one destroyed by fire on Jan. 10: Administration building, 40 × 200 ft., three stories; barrack building, 45 × 274 ft., three and four stories; gymnasium, 60 × 100 ft., one story; mess hall, 60 × 100 ft., one story with kitchen 40 × 60 ft. All the buildings are to be of reinforced concrete and to be erected under the Aiken system. The contractors are the AIKEN REINFORCED CONCRETE CONSTRUCTION CO., 50 Church St., New York. The total cost of the buildings and equipment will be about $250,000.

PHILADELPHIA, PA.—Sauer & Hann, Archs., 1112 Chestnut St., have completed plans for the $50,000 commercial building which Walter M. Steppacher & Bro. will erect at 1304-6 Race St. The plans, which will be sent to builders for estimates soon, provide for a 5-story and basement brick and reinforced-concrete structure on a lot 36 × 129 ft., extending to Quarry St.

The contract for a $50,000 parish house for St. Luke's P. E. Church, on Germantown Ave., above Coulter St., has been awarded to A. WHITEHEAD, 1624 Latimer St. It will be a stone building in Gothic design, 54 × 111 ft.

Excavations have been begun by THOMAS REILLY, 1616 Thompson St., for the erection of a $65,000 stone edifice and Sunday School for the Methodist Episcopal Church of the Advocate, corner of Wayne Ave. and Queen St., Germantown.

Plans are being prepared by John T. Windrim, Commonwealth Bldg., and Cope & Stewardson, 320 Walnut St., Archs., for the building for the Evans Musuem, which is to be built at the northwest corner of 40th and Spruce Sts. The building will be an ornamental structure to cost about $400,000. It will be used to house the Evans dental exhibition. A part of it will be devoted to educational purposes. It is expected that work on the building will begin early next fall.

Samuel Shoemaker, 63d and Market Sts., is taking estimates on plans for 108 2-story houses to be built on the east and west sides of First St. and on the east and west sides of Felton St., between Market and Arch Sts. The cost of the operation will be $150,000.

JOHN R. WIGGINS & CO., Heed Bldg., have been awarded a contract for a police, patrol and fire station, at 319 to 325 Race St., to cost $50,000.

PHILADELPHIA, PA.—Morris Lang, 320 Market St., has purchased from James R. Gates the plot of ground from 136 to 148 West Chelten Ave., between Greene St. and Wayne Ave., lot 120 × 155 ft., on which apartments will be built to cost about $50,000.

Contracts have been awarded by the Philadelphia & Reading Ry. Co. for the erection of the Columbia Ave. passenger station to IRWIN & LEIGHTON, Franklin Bldg., instead of Irving & Weighton, as erroneously stated last week.

The congregation of the Roman Catholic Church of the Holy Cross, on East Mount Airy Ave., Mount Airy, has decided to build a stone Gothic church, rectory and convent. When completed the parochial school will occupy the present church for class room and auditorium. The new structure will be three stories in height and measure 70 × 114 ft.

SEWICKLEY, PA.—Bids are asked until 3 p. m., May 14, by James Knox Taylor, Superv. Arch., Treasury Dept., Washington, D. C., for the construction, complete (including plumbing, gas piping, heating apparatus, electric conduits and wiring) of the U. S. post-office at Sewickley, Pa.

PITTSBURG, PA.—The Building Commit- 1
tee having in charge the erection of a SyrN-
temple for the Shriners in the Oakland 1926,-
trict are getting the plans into shape
the construction work will be begun ght and
a few weeks. The building will
less than $250,000, and accordin
plans now being perfected, the struc city has
face on two streets, and will have HUNTER,
capable of seating not less than 2 constructing
FORT CASWELL (Southport n sewer sys-
N. C.—Bids are asked until 5
by Lieut. William R. McClea ity has voted
M., for construction, plumbin onstruction.
wiring with fixtures two dou
ficers' quarters and one ordn s—The sewers
this post. 3 will be of
Construction
FORT MOULTRIE, S. C.— ity and not let
by the Constructing Q. M.,
April 28, for constructing o
lery Engineer's office and ds will be re-
brick or reinforced concrete City Clerk until
and one brick, or reinforced struction of pipe
termaster's storehouse at For and alleys, ag-
following quan-
KNOXVILLE, TENN.—D 056 lin. ft.; 18-
SONS have been awarded th ft.; 15-in. pipe
struct the Deaderick Ave. pipe sewer, 10,-
the estimated cost of the er, 16,366 lin. ft.;
$50,000. The new church in. ft.; 6-in. side
ing capacity of 3,000. T ; 184 brick man-
mittee is composed of th tanks; 74 catch
M. Leek, Chn.; J. T. Moo rdinance No. 305,
E. Weaver, John P. Matl ent Sewer District
G. W. B. Gray, Lem Ande plans and spec fi-
J. H. Payne and S. G. Ke office of Sam. R.

*CATLETTSBURG, KY. Suids will be received
by James Knox Taylor, Su ury Dept., Washington, Dangille, City Recdr.,
May 19, for the cons I. of Dist. 4 of
plumbing, gas piping, a.

ALTAMONT, KAN.—The Kansas Union Traction Co., it is announced, will commence engineering work soon on its proposed line. As noted on Dec. 23, 1909, this railway will connect Parsons and Coffeyville via Columbus, Oswego, Altamont, Mound Valley and Cherryvale, 90 miles. Repair shops and the power station will be located at Altamont. Company plans to furnish current for light, heat and power purposes. Capital stock authorized, $1,000,000; issued, $500,500. William J. Jones, Altament, is Pres.; Philip Strack, 23 Postal Telegraph Bldg., Indianapolis, Ind., Vice-Pres.; Barney McDaniel, Altamont, Secy.; C. N. Petty, Altamont, Treas. Archer, Rollins & Co., Kansas City, Mo., are Electrical Engrs. Noted on Aug. 26, 1909.

SHAWNEE, KAN.—The Kansas City, Lawrence & Topeka Ry. Co., has awarded contract, it is said, to the GUILFORD CO., Kansas City, Mo., for building six miles of line from the present terminal at Shawnee, Kan., southwest to Zarah. Graham Hughes is Ch. Engr., K. C., L. & T. Ry. Co., Rialto Bldg., St. Louis.

YANKTON, S. DAK.—Articles of incorporation have been filed for the Iowa & Dakota Interurban R. R. Co., with headquarters at Yankton, and capital of $500,000. The board of directors is composed of B. E. Wells K. E. Bamford and H. E. Valentine, of Centerville; L. F. Phillips and W. G. Kirkpatrick, of Wagner; and Albert Amundson, of Lake Andes, all in South Dakota. The company proposes to build a line from Sioux City, Iowa, to Mitchell, a distance of 125 miles at an estimated cost of $20,000 a mile. It will cross the counties of Woodbury and Plymouth, in Iowa; and Union, Clay, Turner, Yankton, Hutchinson, Hanson and Davison in South Dakota.

BILLINGS, MONT.—We are officially advised that surveys are being made for the Eastern Montana Electric Ry. and that right-of-way will be secured upon completion of survey. Capital has been obtained. This railway will be 87½ miles long, extending from Billings to Red Lodge, Mont. F. A. Kesselhuth is Ch. Engr., Billings. Daniel D. Gile is Vice-Pres., Room 1006, 27 William St., New York. Noted on Feb. 10.

BRYAN, TEX.—The incorporators of the Bryan & College Interurban R. R. Co. are W. H. Hunter, of Crowley, La.; O. E. Gammill, W. E. Saunders, J. K. Parker, G. S. Parker, H. O. Boatwright, J. W. Doremus, J. E. Butler, J. T. Maloney, J. W. English, L. L. McInnis and A. W. Wilkerson, of Bryan. Work is now under way. Noted on March 31.

HOUSTON, TEX.—The Penn City Terminal Co., of Houston, is preparing to build an interurban railway between this city and Penn City, where extensive industrial plants are situated. The proposed road will be about ten miles long, and will be operated either by electricity or gasoline motors. Judge John G. Tod, of Houston, attorney for the company, has been attending to the preliminary details looking to the early construction of the road.

DENTON, TEX.—The Denton & Fort Worth Interurban Ry. Co., which proposes to build an electric line to connect the cities named in its title, has elected the following directors and officers: A. C. Owsley, Pres.; W. B. McClurkan, Vice-Pres.; H. F. Schweer, Treas., and C. E. Scruggs, Secy. Directors: A. C. Owsley, J. C. Colt, B. H. Davenport, U. B. McClurkan, J. N. Rayzor and B. W. Blewett.

GREENVILLE, TEX.—The Eastern Traction Co. has been granted a charter to build an interurban railway operated by any motive power except steam from Greenville to Wolfe City, about 20 miles. Capital, $12,000. The organization is not yet completed, but the line may be extended, if desired, to Bonham, Denison, Honey Grove, Paris, Cooper, Clarksville, Dallas, Plano, Chisholm, or Forney, Tex. Headquarters will be at Greenville. The incorporators are Joseph F. Nichols, R. N. White, L. N. Byrd, S. B. Perkins, Glen A. Coulson, W. M. McBride and J. B. Murphy, of Greenville; J. H. Blocker, H. E. Vaughan, H. C. Tittsworth, J. Riley Green and J. H. Myrick, of Wolfe City, Tex. Jos. F. Nichols is Secy.

MONTESANO, WASH.—We are officially informed that the Grays Harbor & Interurban Ry. Co. has made surveys and secured necessary capital for building its line from Grays Harbor to Puget Sound, 80 miles. Right-of-way is not secured. A. L. Paine is Pres., Hoquiam, Wash.; J. M. Clapp is Ch. Engr., Seattle, Wash. Noted on Feb. 10.

VACAVILLE, CAL.—The City Trustees have granted the Vallejo & Northern R. R. Co., of Vallejo, a franchise to build an electric railway over certain streets in Vacaville. This projected railway will connect Vallejo, Cordelia, Suisun, Vacaville and Sacramento. Noted fully on March 3, under Sacramento.

LIGHT AND POWER PLANTS.

(* *denotes that this work is advertised in Engineering News.*)

BOSTON, MASS.—Contract for installing the electric system in the Abraham Lincoln School has been awarded to EDWIN C. LEWIS, Inc., 121 Federal St., at $11,108.

PITTSFIELD, MASS.—The directors of the Pittsfield Electric Co. have awarded to STONE & WEBSTER, 147 Milk St., Boston, contract for the enlargement of the power plant at Silver Lake. It is proposed to expend between $125,000 and $150,000, and the capacity of the company's plant will be doubled. New equipment includes a 750-KW. generator and boiler. Work will be started at once.

BRIDGEPORT, CONN.—The Connecticut Co. contemplates increasing the output of its power plant here to 5,000 KW. This company operates the street railway system owned by the New York, New Haven & Hartford R. R. Co. in the southern part of Connecticut. C. H. Chapman is Supt.

EAST HARTFORD, CONN.—The Commissioners of the Fire District have signed a 5-year contract with the HARTFORD ELECTRIC LIGHT CO. for the lighting of the streets of the district. The contract calls for Tungsten lamps of 100 candle power at $17.50 per lamp per year.

*NEW YORK, N. Y.—Bids will be received by the Board of Water Supply until 11 a. m., April 26, for Contract U, for furnishing and delivering four 100-HP. and one 150-HP. boilers. John A. Bensel is Pres.

ALTOONA, PA.—The City Council has awarded to the PENN CENTRAL LIGHT & POWER CO. contract for street lighting for a period of ten years, beginning April 4, under the terms of which the company is to replace the present lamps with metallic flame arc lamps, of which at least 125 must be installed within six months.

WOODVILLE, PA.—Bids are asked by R. J. Cunningham, County Controller, Pittsburg, until noon, April 20, for the construction of a power-house for the Allegheny County House, Woodville.

WEST FINLEY, PA.—Plans have been completed for the construction of a large pump station by the Natural Gas Co. on land purchased from the George Gray farm about one mile from this place. Work will be started at once on the project.

PHILADELPHIA, PA.—Bids are asked by the Bureau of Yards and Docks, Navy Dept., Washington, D. C., until 11 a. m., May 7, for condensers, fire pump, feed-water heater and piping. R. C. Hollyday is Ch. Bureau. Specifications are on file at the office of Engineering News, New York.

COLUMBUS, GA.—The SULLIVAN MACHINERY CO., Railway Exchange, Chicago, Ill., has been awarded contract by Stone & Webster, of Boston, Mass., for making test borings at the proposed site of the dam to exactly determine the location and character of suitable rock for the foundations, with Sullivan diamond prospecting core drills. This contract was erroneously noted on March 31 as awarded to the Sullivan Machine Co. for constructing foundations of the dam.

WASHINGTON, GA.—The Washington Lumber & Power Co., lately incorporated with a capital stock of $50,000, has purchased a site on Liberty St., on which to erect an electric power plant, planing mill, dry kiln, shops and storage room, the power plant to furnish electricity to operate the machinery in the buildings and also for commercial purposes here. P. J. Holliday is interested.

WAYCROSS, GA.—The Ware County Light & Power Co. has awarded contract to the ALLIS-CHALMERS CO., of Milwaukee, Wis., for new equipment for its plant, to include two 18-in. × 24-in., single-tandem gas engines, each direct connected to a 250-KVA., 3-phase, 60-cycle, 2,300-volts, 200 r. p. m. alternator. A motor generator set and two direct-current generators driven by small gas engines will provide for excitation and an induction motor will drive an air compressor. Gas will be supplied by producers.

GUNTERSVILLE, ALA.—The Guntersville Realty Co. will soon award contracts for the construction of an electric light and power plant. Estimated cost, about $10,000. W. J. Wilson, of Guntersville, is Engr.

DADEVILLE, ALA.—The Russell Mfg. Co. is negotiating with John W. Pace for the purchase of water rights owned by him on Big Sandy Creek, nine miles south of here. The promoters proposed to develop the water power to generate electricity, to be transmitted to Alexander City, about eleven miles distant, for manufacturing purposes.

*LAKE CHARLES, LA.—The Kinder Ice, Light & Water Co. has been organized for the purpose of erecting an electric light and power plant and other public utilities here. Paul O. Moss, of Lake Charles, is Pres. The company has a capital stock of $25,000.

MARTINS FERRY, OHIO.—The City Council has voted to issue $18,000 of bonds for improvements to the municipal electric light plant.

AKRON, OHIO.—The Quaker Oats Co. has awarded contract to the ALLIS-CHALMERS CO., of Milwaukee, Wis., for the remainder of motor equipment for its new cereal factory being erected here. The contract includes 19 squirrel-cage induction motors, ranging in size from 10 HP. to 75 HP.

The Northern Ohio Traction & Light Co. is planning to construct a 7,500-HP. plant at a cost of $1,500,000, to take the place of its present power houses at Bedford, Cuyahoga Falls, Akron, Canton and Midvale. W. H. Douglass is Gen. Supt.

COLUMBUS, OHIO.—Contracts have been awarded for equipment for the Spring St. power plant of the Columbus Railway & Light Co., as follows: To THE JEFFREY MFG. CO., of Columbus, Ohio, for structural steel work for the new plant and for coal and ash handling machinery; the ALLIS-CHALMERS CO., of Milwaukee, Wis., for turbo-generators with a rating of 4,000 KW., condensers to the WORTHINGTON PUMP CO., of New York; for boilers, to the BABCOCK & WILCOX CO., 85 Liberty St., New York; the GREEN FUEL ECONOMIZER, of Chicago, Ill., for inducted draft fan apparatus and automatic stokers. Estimated cost, about $200,000.

CONNERSVILLE, IND.—The Connersville Light, Heat & Power Co. is preparing to ask for bids for enlarging and remodeling the plant. Some new machinery will be installed. Charles P. Stauffer is Secy.

LOGANSPORT, IND.—S. A. Vahn, W. T. Giffe, Capt. W. H. Snider and others have secured a franchise to construct, equip and operate a central station heating plant. Bids will be asked in a few weeks.

INDIANAPOLIS, IND.—The Circle Merchants' Association has decided to place a special lighting system around Monument Sq., to consist of a number of 640-c. p. arc lamps, six to the square. R. E. Gregg, Hubert Keller and Norman Perry have charge of the matter and will decide upon the type of lamp to be used.

STERLING, ILL.—Announcement is made here that the U. S. Government dam across Rock River is to be hydroelectrically equipped immediately and will develop 9,000 HP.

GREEN BAY, WIS.—Contract for electric fixtures for the court-house has been awarded to the MORREAN GAS FIXTURE CO., of Cleveland, Ohio, at $3,000.

WAUKESHA, WIS.—The Waukesha Lime & Cement Co. has awarded contract to the ALLIS-CHALMERS CO., of Milwaukee, Wis., for equipment for its plant, which includes one Gates breaker, two Gates elevators and four 3-phase, 60-cycle, 400-volt, squirrel cage, induction motors varying in size from 30 HP. to 150 HP.

SIGOURNEY, IOWA.—On March 28 the citizens voted to grant a franchise to J. F. Bray to construct and operate an electric light plant here.

DAVENPORT, IOWA.—The Tri-City Ry. & Light Co., Davenport, has let contract to the WESTINGHOUSE ELECTRIC & MFG. CO., 171 La Salle St., Chicago, Ill., for the installation of a 12,000-HP. turbo-generator at its power plant in Moline.

FORT RILEY, KAN.—See item under Buildings.

LITTLE ROCK, ARK.—The FORT WAYNE ELECTRIC WORKS, of Fort Wayne, Ind., has secured contract for the equipment of the municipal electric light plant at $39,500, plant to have sufficient output to provide for 1,000 lamps. The street lighting system will utilize 500 lamps.

ALTUS, OKLA.—The City Council has engaged the J. W. Maxcy Engineering & Construction Co., Houston, Tex., to take charge of the work in connection with improvements to the water and sewer systems and electric light and power plant. Estimated total cost, $135,000; of extensions to the electric plant, $35,000.

POTEAU, OKLA.—Plans have been prepared by H. R. Nichol, Engr., of Muskogee, Okla., for an electric light, water-works and ice plant for the Poteau Electric Light & Ice Co. Estimated cost, $15,000.

SANTA RITA, N. MEX.—The Chino Copper Co. has filed an appilcation in the office of the Territorial Engineer at Santa Fe for the use of the water from Apache Tejo Spring, near Santa Rita, Grant County, for the operation of a hydroelectric plant that it will erect. It is stated that the proposed plant will cost about $250,000, and will furnish power for operating the machinery of the company's mines and reduction plant.

SILVER CITY, N. MEX.—The Black Range Reduction Works has adopted plans for the erection of a hydroelectric plant on the Gila River, near its mines. The proposed plant will afford power for operating the machinery of the company's property.

TENINO, WASH.—The Tenino Light & Power Co. is preparing to begin work on a $200,000 power plant on the Skookumchuck River this spring. S. W. Fenton, of Tenino, is Pres.

MEDFORD, ORE.—J. R. Anderson has applied for a franchise to erect a gas plant. Work will start at once if it is granted. Tanks and pipes to cost $100,000 will be installed the first six months.

BANNING, CAL.—See item under Water Supply—Irirgation.

LONG BEACH, CAL.—The Southern California Edison Co. has secured all the property necessary in this city on the inner harbor for its proposed power plant, work on which will begin as soon as possible. The company proposes to spend $2,000,000 on the initial equipment and will eventually expend $8,000,000. The plant will ultimately have an output of 250,000 HP.

MARYSVILLE, CAL.—Notice of appropriation of two water rights has been filed by Newton C. Cleveland, of the Yuba Consolidated Goldfields Co. The claims call for 20,000 ins. of water in Yuba River, opposite Da Guerre Point, for generating electricity, irrigation, industrial and agricultural purposes. The water is to be diverted by a dam, thence to ditches, flumes and pipes.

COLUSA, CAL.—Surveys are being made by the Pacific Gas & Electric Co. for a route for a new pole line from Marysville to Meridian, thence to Colusa. The wires will carry 60,000 volts and will furnish electricity for the Northern Electric Ry. and for lamps in this city. The town will be rewired.

SAN JACINTO, CAL.—The Ramona Power & Irrigation Co. on March 23 filed articles of incorporation with the County Clerk. The company is organized to erect, maintain and operate water and steam power plants for generating electricity for power and light purposes. Capital, $10,000. T. S. Ingham, of Highland, Cal., is interested.

GRANGEVILLE, IDAHO.—The City Council has granted Walter H. Hill a 30-year franchise to construct and operate an electric light and power system here. A power plant on the Clearwater River, five miles distant, will be erected. Estimated coct, about $100,000.

VOLLMER, IDAHO.—Plans are being perfected for the organization of the Craig Power Co., of Vollmer, with a capital stock of $50,000. The company has acquired a power site on Lawyer's Canyon Creek, above the railroad bridge, and will be able to generate 500-HP. W. J. Ramoy, of Vollmer, is interested.

BELLEVILLE, ONT.—James G. Lindsay, City Engr., has recommended to the City Council the installation of two turbine pumps and two 85-HP. motors at the water-works. Estimated cost, $5,000.

PETERBORO, ONT.—The proposed extension to the plant of the Canadian General Electric Co. will be built in Peterboro. This was decided at a joint meeting of the City Council and Water Commissioners on April 6, when the company's offer was accepted. The company will expend $250,000, and will erect a power-house at the new water-works dam to generate the power for their own purposes and pay the city $2,000 a year for the power. At the end of 2[illegible] [illegible]ars the Canadian General Electric Co. [illegible] hand over the plant to the city with[illegible] [illegible]ayment.

CALGARY, ALTA.—An [illegible] [illegible]e has been prepared for extensions a[illegible] [illegible]provements to the municipal electric li[illegible] [illegible]ant, to cost about $70,000 and include[illegible] [illegible]74 lbs. of weatherproof wire, at $15,[illegible] [illegible]0 poles, at $2,169; 2,600 crossarms, a[illegible] [illegible]20; rubber-covered wire, porcelain tub[illegible] [illegible]mp sockets, sundries, etc., at $5,621; [illegible]rs, various sizes, $12,000; transformer[illegible] [illegible]rious sizes, $10,280; 100 arc lamps a[illegible] [illegible]tion transformers and equipment, $7,[illegible]

Plans have been completed [illegible] T. Childs, City Engr., for the munici[illegible] [illegible]ctric light and power plant. The com[illegible] [illegible]ners have decided to recommend to th[illegible] Council a by-law covering the cost [illegible] submitted to the ratepayers. The pro[illegible] plant will have an output of 2,000 HP [illegible] provision will be made to increase i[illegible] 4,000 HP. when needed. Estimated co[illegible] [illegible]5,000.

EL TIGRE, MEX.—The El [illegible]re Mining Co. will install an electric po[illegible] plant here for the purpose of furnishi[illegible] power for operating the machinery of [illegible] mines and mill.

VERGEL, MEX.—The Tez[illegible]n Copper Mining & Smelting Co. has o[illegible]ed a concession from the Federal Go[illegible]ment for the erection of a hydroelectri[illegible] [illegible]t on the Sola River, near here. The p[illegible]sed plant will have a capacity of 1,4[illegible] HP., which will be used to operate the ma[illegible]ry of the mines and mill of the compan[illegible]

PACHUCA, MEX.—The new [illegible]nsmission lines which the Mexican Light [illegible] Power Co. is constructing to Pachuca bra[illegible] off from the Necaxa-Mexico City transm[illegible] line at a point about seven miles from Tulancingo and will run from that point d[illegible] to Pachuca. It will consist of two [illegible]rcuits of three copper cables each. Steel towers upon which the cables will be placed are now being erected. In addition to furnishing power for a number of mines in the Pachuca district, the company will also furnish the Compania de Luz y Fuerza of Tulancingo, State of Hidalgo, with power to augment its present service in that town and district.

ALAMOS, MEX.—It is reported that the plans for the hydroelectric plant that the Mayo River Power & Land Co. will erect on the Mayo River at San Bernardo, Alamos district, have been approved by the officers of that company, and the order has been given for the construction work to be started. The principal offices of the company are in Denver, Colo.

BRIDGES.

(* *denotes that this work is advertised in Engineering News.*)

WATERBURY, CONN.—R. A. Cairns, City Engr., has been authorized to prepare plans for the construction of a bridge over Sled Hall brook.

SAYBROOK, CONN.—Bids for constructing the superstructure of the proposed Saybrook Bridge will be received in May or early June by the Saybrook and Lyme Bridge Commission. Edward W. Bush is Ch. Engr.

WOODSIDE, N. J.—The Assembly, it is reported has passed the bill authorizing the construction of a bridge over the Passaic River connecting Woodside and Arlington. Estimated cost, $600,000.

CAPE MAY, N. J.—Contract for constructing the steel bridge at Schellingers Landing has been awarded by the Board of Chosen Freeholders of Cape May County to R. E. HAND and HARRY HOFFMAN at $9,859.

PHILADELPHIA, PA.—Bids will be received by W. Hunter, Ch. Engr. Philadelphia & Reading Ry. Co., 520 Reading Terminal, until noon, April 19, for Contract 47, signal bridges, Green and Norris Sts. and 17th and Indiana Sts. to Richmond Branch.

STROUDSBURG, PA.—Bids are asked by the County Commissioners until 11 a. m., May 2, for the erection of two double-arch stone bridges, one over McMichael's Creek at Kellersville, the other over Pocono Creek at Tannersville, both in Monroe County. Joseph Overfield is Clk.

WILKES-BARRE, PA.—The Schofield Engineering Co., Arcade Bldg., are preparing plans for a 9-span bridge, 2,600 ft. long, over the Susquehanna River, at Wilkes-Barre, for the Board of Commissioners of Luzerne County. Estimated cost $225,000. Separate estimates will be received in about 30 days on steel superstructure and concrete substructure and viaduct work.

BALTIMORE, MD.—Bids are asked until 11 a. m., April 20, by the Board of Awards, care of J. Sewell Thomas, City Register, for a steel bridge on Franklin Road over Gwynn's Falls.

ROANOKE, VA.—Bids will be received by the Wasena Land Co., P. S. Miller, Pres., until April 16 for the construction of a bridge.

ELKINS, W. VA.—Bids are asked by Randolph County, until May 6 for the construction of a bridge over Cheat River. F. A. Rowan is Clk., County Court.

WINSTON-SALEM, N. C.—The Forsyth County Commissioners have decided to construct a steel bridge across the Yadkin River.

ATLANTA, GA.—The Louisville & Nashville R. R., W. H. Courtney, Ch. Engr., Louisville, Ky.; Atlanta & West Point R. R., C. A. Wickersham, Gen. Mgr., Atlanta & Georgia R. R., Thomas K. Scott, Gen. Mgr., Augusta, Ga., will construct a viaduct along the entire length of the south side of freight depot, so as to be on level with the third floor of structure. The roadway is to be 800 ft. long and 35 ft. wide. Estimated cost, $50,000.

TALLADEGA, ALA.—We are officially advised that the ROANOKE BRIDGE CO. of Roanoke, Va., has been awarded contract at $4,250 by Talladega County for the construction of a steel bridge over Choccolocco Creek at Jackson's Shoals. J. E. Camp is Judge Probate.

ELIZABETHTON, TENN.—The city has awarded contract, at $7,500, to the CONVERSE BRIDGE CO., of Chattanooga, Tenn., for constructing a 30-ft. steel bridge across Tow River.

CINCINNATI, OHIO.—Bids will be received until April 15 by the Board County Commissioners for constructing two concrete bridges, one on the Westchester Road, south of Crescentville, and the other on the Shedd Road, ½ mile south of Blue Rock Pike, Colerain Township, as per specifications Nos. 19 and 17 respectively. Fred Oreihs is Clk.

NEWARK, OHIO.—Bids will be received by the Board of Commissioners of Licking County until 1 p. m., April 27, for the construction of the substructure and superstructure of the Utica bridge, on Homer Road over North Fork, Washington Township. Fred S. Cully is County Surv.

McARTHUR, OHIO.—Bids will be received by the Board of Trustees of Brown Township until 2 p. m., April 18, for the construction of a stone bridge.

NEW PHILADELPHIA, OHIO.—Bids will be received by the Board of Commissioners of Tuscarawas County until 1 p. m., April 19, for the construction of three concrete culverts and two bridge abutments. W. C. Shott is County Audr.

TIPPECANOE CITY, OHIO.—H. E. Whitlock, County Engr., Troy, is preparing plans for a bridge over the Miami River, at Tippecanoe City. The structure will have three spans of 111 ft. each concrete piers and abutments. Alternate bids will be received on reinforced concrete construction. Bids will be received by the Board of Commissioners of Miami County, Troy, about May 1. Joseph Sinks, is County Audr.

EDENTON, OHIO.—Bids will be received until noon, May 2, for the construction of the substructure and superstructure of a bridge over Shuelick Creek on Zenia Road. J. L. Larkin, Batavia, is Audr., Clermont County.

DAYTON, OHIO.—Bids will be received until noon, April 22, by the Department of Public Service for a hand-power lift bridge, either bascule or straight-lift type, over the Miami and Erie Canal at Webster St., Dayton, Ohio. The bridge will be a skew bridge, about 50-ft. span, to be of steel construction, with wooden floor. Bidders are to file plans and specifications for same with their bids.

Plans are being prepared for the construction of a concrete steel bridge, Melan system, over the Great Miami River at Stewart St. The bridge will be of seven arches, approximately 650 ft. face to face of abutments, 60 ft. wide. It will be about a month before bids will be received upon this structure. J. C. Ely is Dir.

GREENCASTLE, IND.—The Commissioners of Putnam County will soon ask for bids for the construction of a steel bridge over Eel River near Wallace Junction.

INDIANAPOLIS, IND.—The Beech Grove Traction Co., has let a contract to JOHN McGREGGOR for the construction of a bridge over Bean Creek.

HAMMOND, IND.—The Lake County Council, Crown Point, has appropriated $75,000 for the construction of a bridge over the Calumet River, at Hohman St., Hammond.

DANVILLE, IND.—Bids will be received by the Board of Commissioners of Hendricks County until 10 a. m., April 19 for the construction of various bridges. William H. Nichols is County Audr.

LAPORTE, IND.—The Laporte County Commissioners have let to the ROCHESTER BRIDGE CO., Rochester, Minn., the contract for constructing the English Lake bridge, in the south end of the county, at $9,136.

*YPSILANTI, MICH.—The city will receive bids until noon, May 16, for the construction of a 3-arch reinforced concrete bridge over the Huron River, according to plans and specifications now on file in the office of S. Damon, City Clk. Length of bridge, 225 ft.; width over all 46 ft.

HIGHLAND PARK, ILL.—Bids will be received by the Board of Local Improvements until 8 p. m., April 21, for the construction of a reinforced concrete bridge, with 16-ft. roadway and 4½-ft. sidewalk on both sides. H. L. Bowen, is Comr.

OTTAWA, ILL.—Bids will be received by the Surveyor of LaSalle County until 1.30 p. m., April 16, for repairs to the steel bridge between Rutland and Dayton Townships.

STREATOR, ILL.—The lowest bid submitted to the city on April 4 for the construction of a bridge over the Vermillion River at Bridge St. was that of the Milwaukee Bridge Co. of Milwaukee, Wis., at $35,722. Ralph Modjeski, Chicago, Ill., is Engr.

MARSHALLTOWN, IOWA.—The Board of Supervisors of Marshall County is asking for bids for concrete arches as follows: Two 30-ft., two 50-ft., two 60-ft. and one 90-ft., bidders to furnish plans. E. Cornell is Clk. Bd., Marshalltown.

DES MOINES, IOWA.—We are officially advised that plans and specifications have been completed and filed with the City Council for a 6-span reinforced concrete bridge to be built over the Des Moines River at Walnut St.: Length of arches center to center, 75 ft.; width of roadway, 58.5 ft.; two sidewalks, each, 12 ft.; total length of bridge, 503 ft.; height of roadway above low water, 28 ft. The bridge is designed for heavy city traffic including double-track city railway. Estimated cost, $150,000 Designed by John W. Budd and W. D. Maxwell, Civil Engrs. John W. Budd is City Engr.

*MINNEAPOLIS, MINN.—We are officially advised that bids were received on March 31, by William Pierce Cowles, Consulting Engr., 925 New York Life Bldg., Minneapolis, for three reinforced concrete stone-faced bridges over waterways connecting lakes in the city. Contract has been awarded to the SECURITY BRIDGE CO. of Minneapolis, work to commence at once and to be completed by Sept. 1, 1910.

ST. PAUL, MINN.—The Board of County Commissioners have made a demand upon the Wisconsin Central Ry. Co., Minneapolis, Minn., to replace the present old wooden bridge across Arcade St., St. Paul, with a steel or concrete structure. E. G. Krahmer, is County Audr.

The Board of Park Commissioners, George T. Redington, Secy., have awarded the contract for the construction of a steel and concrete bridge over the Phalen Park Canal to JACOB LAUER, of St. Paul, at $10,474. The contract for grading Wheelock parkway was awarded to CHRIST JOHNSON, St. Paul, at $10,200.

WILLARD, KAN.—Bids will be received by the Board of Commissioners of Shawnee County, at the office of S. G. Zimmerman, County Clk., Topeka, until noon, April 22, for the construction of one 188-ft. steel span bridge on south end of bridge across the Kansas River, near Willard.

GRAND ISLAND, NEB.—The STANDARD BRIDGE CO., Omaha, Neb., has been awarded contract for the erection and construction of steel, wooden, pile and truss bridges to be built for this county for one year from March 28.

FREMONT, NEB.—The Supervisors of Dodge County and the Saunders County Commissioners on April 3 awarded contract to the STANDARD BRIDGE CO. of Omaha, Neb., for the construction of the new steel spans in the Platt River bridge. There will be three new 150-ft. spans, 16-ft. driveway.

BUTTE, MONT.—Plans for the new steel viaduct soon to be built by the Northern Pacific Ry. over Harrison Ave, have been accepted by the City Engineer's office and were returned to the company's engineers on April 1. Work on the viaduct will commence within the next 60 days in all probability. It will cost about $16,000 when completed and will provide a roadway 41 ft. in width on Harrison Ave. enlarging the present roadway by more than 10 ft. The abutments, one on each side, of the roadway, will support the viaduct, thus obviating the inconvenience of a divided roadway underneath.

ST. LOUIS, MO.—Bids will be received by the Board of Public Improvements about April 25, for the construction of the Kingshighway viaduct, at Kingshighway Boulevard, to be 1,856 ft. long, with 60-ft. roadway, two 14-ft. walks three main spans and twelve approach spans. W. B. Dryden is Secy. O. W. Childs is City Engr.

GAINESVILLE, TEX.—Gainesville, Oklahoma & Western R. R. Co., J. C. Whaley, Pres., will construct four steel bridges across Clear Creek, Elm Creek, Denton Creek and Red River.

FORT WORTH, TEX.—The City Commission is considering plans prepared by L. S. Leversedge, John B. Hawley and the City Engineer for a bridge across the Trinity River, connecting Fort Worth proper with North Fort Worth.

WEBBERS FALLS, OKLA.—The Board of Commissioners of Muskogee County, Muskogee, has let contract to the VINCENNES BRIDGE CO., Vincennes, Ind., at $4,750, for the construction of one 160-ft. steel bridge over Dirdnie Creek, near Webbers Falls. W. E. Looper is County Clk.

IRONDALE, WASH.—The Comrs. of Jefferson County at Port Townsend will soon let contract it is reported for constructing a bridge over Chimacum Creek, to connect Irondale and North Irondale. Estimated cost, $8,000.

LOS ANGELES, CAL.—The following bids have been opened for constructing a reinforced concrete bridge on Eagle Rock Road: J. T. Hall-Marvin Co., $19,700; William F. Bixby, $10,965; Mercereau Bridge & Construction Co., $11,250; Peterson & Schmidt, $11,500; California Ornamental Brick Co., $12,626; W. A. Dontauville, $14,470.

The WEBER-DULLER CO., Pacific Electric Bldg., has been awarded contract by the Pacific Electric R. R. Co., for constructing a reinforced concrete bridge, 410 ft. long, at $4.95 for each cu. yd. concrete in place, in abutments. Walls and footings same, $5.25 cu. yd. concrete in place in piers.

WINNEMUCCA, NEV.—Bids for the construction of a reinforced-concrete bridge across the Humboldt River and two reinforced concrete culverts near the above mentioned bridge all in the town of Winnemucca, Humboldt Co. will be received by the County Clerk, of the Board of County Commissioners until 2 p. m., May 3. Plans and specifications are on file. R. E. Trousdale, Clk.

BRANTFORD, ONT.—By-laws were carried on April 4 for the purpose of raising $55,000 for a new bridge over the canal at Market St. H. F. Leonard is City Clk.

BUILDINGS.

(* *denotes that this work is advertised in Engineering News.*)

FORT WILLIAMS (Cape Cottage postoffice), ME.—We are officially advised that bids were received by Capt. C. F. Humphrey, Jr., Constr. Q. M., 655 Congress St., Portland, Me., until 10 a. m., April 2, for the construction, plumbing, heating and electric lighting of the following buildings at Fort Williams, Me.: (a) One administration building (brick); (b) one guardhouse (brick); (c) two sets of field officers' quarters (brick); (d) two double sets captains' quarters (concrete); (e) one double lieutenants' quarters (brick); (f) one bakery (brick); (g) one quartermaster's storehouse (brick): W. H. Keyes & Co., 95 Milk St., Boston, Mass., (a) $20,471, (b) $19,403, (c) $26,194, (d) $37,610, (e) $13,847, (f) $6,323, (g) $15,711; Norman H. Cook, Portland, Me., (a) $21,939, (b) $19,889, (c) $20,566, (d) $30,680, (e) $13,889, (f) $8,133, (g) $13,891; Kennedy & Peterson, 18 Cambria St., Boston, Mass., (a) $19,841, (b) $17,417, (c) $19,668, (d) $33,384, (e) $12,590, (f) $6,500, (g) $13,491; John W. Burrowes Co., Portland, Me., (a) $20,800, (b) $18,700, (c) $20,750, (d) $37,700, (e) $13,450, (f) $7,975, (g) $13,950; Mahoney Construction Co., Portland, Me., (a) $18,277, (b) $14,962, (c) $19,132, (d) $28,174, (e) $10,495, (f) $6,317, (g) $11,996; Charles E. Currier Co., 110 Summer St., Boston, Mass., (a) $22,231, (b) $18,048, (c) $21,386, (d) $32,794, (e) $14,021, (f) $6,885, (g) $15,561; Conners Bros. Co., Lowell, Mass., (a) $20,900, (b) $20,500; (c) $21,300, (d) $28,600, (e) $11,800, (f) $7,600, (g) $15,060; W. H. Fissell & Co., 1133 Broadway, New York, (a) $23,700, (b) $17,800, (c) $22,000, (d) $35,400, (e) $15,300, (f) $6,900, (g) $16,200.

PORTSMOUTH, N. H.—Bids are asked until 11 a. m., May 21, by the Bureau of Yards and Docks, Navy Dept., Washington, D. C., for rebuilding and fireproofing building No. 20, U. S. Navy Yard, Portsmouth.' Specifications are on file at the office of Engineering News, New York.

CAMBRIDGE, MASS.—A gymnasium, to cost $1,000,000, is to be built by Harvard University, according to local press reports. Tentative plans for the building have been submitted, and the general design has met with approval. The plans call for a 1-story structure, with an arched roof of steel and glass 65 ft. high, except where the administration offices will occupy a second story in the facade. The gymnasium proper is to be 292 × 96 ft., it is stated. The roof over this exercising hall will be 70 ft. from the floor. An outdoor track and handball and tennis courts are provided behind the starts and shot-put practice-room, which opens out of the exercise hall. Dr. A. L. Lowell is Pres.

BOSTON, MASS.—The work of razing the building at the corner of State and Broad Sts., recently purchased by S. Vorenberg, 67 Washington St., has been completed, and excavation has begun in preparation for the erection on the site of a 6-story business and office building which is to have all modern conveniences. The structure, which will be numbered 111 State St. and 3 Broad St., will cover an area of about 1,600 sq. ft., having a frontage of 40 ft. on each street. The exterior construction will be of granite, steel and glass for the first two stories and limestone above the second story. The interior finish, except for the corridors, will be oak, with maple floors. On the office floors the partitions will be of glass and oak. The first floor corridors are to be finished in marble, with mosaic floors, and the upper corridors in oak, with terazzo floors. The basement will be finished and have direct entrance from Broad St. The building is to cost about $45,000. It will be completed about Sept. 1. Arthur H. Bowditch, 7 Water St., is Arch.

BOSTON, MASS.—We are officially advised that F. W. Dean, Mill Engr. and Arch., 53 State St., Boston, Mass., has completed plans and specifications for a storehouse for the E. H. Clapp Rubber Co., of Boston, Mass. The building is to be approximately 100 × 116 ft., two stories, of slow-burning mill construction. The second floor is designed to carry a load of 500 lbs. per sq. ft. The columns are to be of wood, supporting steel beams running parallel with one side of the building. Wooden beams running across the building will be hung by brackets from the steel girders. In the second floor every other column will be omitted. The first floor is to be of concrete and the second floor of wood with finished floor of maple. The exterior walls will be carried above the roof line and the roof is pitched for inside drainage.

PROVIDENCE, R. I.—Miss Mary C. Wheeler, who conducts the school for girls on Cabot St., is planning to erect a brick school building on the lot of land at the corner of Hope and Meeting Sts. She has purchased the Jeffrey Hazard house on an adjoining lot and will move that house to Angell St. The plans spbmitted have been drawn by J. W. Sawtelle, 48 Custom House St. The building will front on Hope St., Providence, with a length of 135 ft., and one end will be on Meeting St. The building will be of red brick, of the early English style of architecture. It will be four stories high on one end and three on the other, this being due to the grade of the land. Cost, $85,000.

STORRS, CONN.—Bids will be received by Charles M. Jarvis, Chn. of the Building Com. for the Connecticut Agricultural College, until 10 a. m., April 20, for the construction of a temporary dining hall at Storrs. Plans and specifications may be procured of the committee or from the architect, C. S. Palmer, Meriden, Conn.

NEW YORK, N. Y.—Bids are asked by the Board of Water Supply, 299 Broadway, until 11 a. m., April 26, for Contract 81, for construction of four field office buildings and five horse sheds in the Croton, White Plains and Hill View Division of the Catskill Aqueduct, in the towns of Mount Pleasant and Greenburg and the city of Yonkers, Westchester County, N. Y.

Plans have been filed for a 12-story fireproof loft and store building to be erected for the Criterion Construction Co., L. Mantz, Pres., from designs by Rouse & Goldstone, Archs., 12 West 32d St., at 114 to 120 West 26th St. It is to be of brick, trimmed with limestone and terra cotta, with a frontage of 85.8 ft. and a depth of 85 ft., and an extension. It will cost $300,000.

James H. Cruikshank, 50 Pine St., will build an 8-story warehouse of ornamental brick, 60.11 × 70 ft., from designs filed by William H. Dewar, Arch., with R. E. Ross as associate, at 156 to 160 Leonard St. The cost is $125,000.

An item of $1,000,000 will be inserted in the Sundry Civil Appropriation Bill to cover an increase in the appropriation for the postoffice at the Pennsylvania R. R. terminal in New York, to provide for increased mail-handling facilities. James Knox Taylor is Superv. Arch., Treasury Dept., Washington, D. C.

NEW YORK, N. Y.—Bids are asked by the Department of Public Charities until 2.30 p. m., April 18, for alterations and repairs to building located on the westerly end of Pier at the foot of East 26th St., the City of New York.

Bids are asked until 11 a. m., April 18, by C. B. J. Snyder, Supt. School Bldgs., Dept. of Education, New York, for alterations, repairs, etc., at Public Schools Nos. 24, 26, 36, 43, 52, 53, 55, 68, 74, 86 and 166, Boro. of Brooklyn; for alterations, repairs, etc., at Public Schools Nos. 1, 3, 8, 16, 21, 23, 29, 38, 41, 44, 106, 107, 108, 113 and 124, Boro. of Manhattan; for alterations, repairs, etc., at Bryant High School, and Public Schools Nos. 1, 2, 4, 13, 14, 17, 19, 20, 72 and 76, Boro. of Queens.

*FORT TERRY, N. Y.—Bids are asked by Capt. F. T. Arnold, Constr. Q. M., New London, Conn., until 10 a. m., May 13, for the construction, plumbing, heating, electric wiring and fixtures of one guardhouse, and one quartermaster's storehouse at Fort Terry, N. Y.

CORNWALL, N. Y.—Sebastian C. Jones, C. E., Supt. of the New York Military Academy at Cornwall, advises us that contracts have been let for four buildings, as follows, to replace one destroyed by fire on Jan. 10: Administration building, 40 × 200 ft., three stories; barrack building, 45 × 274 ft., three and four stories; gymnasium, 60 × 100 ft., one story; mess hall, 60 × 100 ft., one story with kitchen 40 × 60 ft. All the buildings are to be of reinforced concrete and to be erected under the Aiken system. The contractors are the AIKEN REINFORCED CONCRETE CONSTRUCTION CO., 50 Church St., New York. The total cost of the buildings and equipment will be about $250,000.

PHILADELPHIA, PA.—Sauer & Hann, Archs., 1112 Chestnut St., have completed plans for the $50,000 commercial building which Walter M. Steppacher & Bro. will erect at 1304-6 Race St. The plans, which will be sent to builders for estimates soon, provide for a 5-story and basement brick and reinforced-concrete structure on a lot 36 × 129 ft., extending to Quarry St.

The contract for a $50,000 parish house for St. Luke's P. E. Church, on Germantown Ave., above Coulter St., has been awarded to A. WHITEHEAD, 1624 Latimer St. It will be a stone building in Gothic design, 54 × 111 ft.

Excavations have been begun by THOMAS REILLY, 1616 Thompson St., for the erection of a $65,000 stone edifice and Sunday School for the Methodist Episcopal Church of the Advocate, corner of Wayne Ave. and Queen St., Germantown.

Plans are being prepared by John T. Windrim, Commonwealth Bldg., and Cope & Stewardson, 320 Walnut St., Archs., for the building for the Evans Musuem, which is to be built at the northwest corner of 40th and Spruce Sts. The building will be an ornamental structure to cost about $400,000. It will be used to house the Evans dental exhibition. A part of it will be devoted to educational purposes. It is expected that work on the building will begin early next fall.

Samuel Shoemaker, 63d and Market Sts., is taking estimates on plans for 108 2-story houses to be built on the east and west sides of First St. and on the east and west sides of Felton St., between Market and Arch Sts. The cost of the operation will be $150,000.

JOHN R. WIGGINS & CO., Heed Bldg., have been awarded a contract for a police, patrol and fire station, at 319 to 325 Race St., to cost $50,000.

PHILADELPHIA, PA.—Morris Lang, 320 Market St., has purchased from James R. Gates the plot of ground from 136 to 148 West Chelten Ave., between Greene St. and Wayne Ave., lot 120 × 155 ft., on which apartments will be built to cost about $50,000.

Contracts have been awarded by the Philadelphia & Reading Ry. Co. for the erection of the Columbia Ave. passenger station to IRWIN & LEIGHTON, Franklin Bldg., instead of Irving & Weighton, as erroneously stated last week.

The congregation of the Roman Catholic Church of the Holy Cross, on East Mount Airy Ave., Mount Airy, has decided to build a stone Gothic church, rectory and convent. When completed the parochial school will occupy the present church for class room and auditorium. The new structure will be three stories in height and measure 70 × 114 ft.

SEWICKLEY, PA.—Bids are asked until 3 p. m., May 14, by James Knox Taylor, Superv. Arch., Treasury Dept., Washington, D. C., for the construction, complete (including plumbing, gas piping, heating apparatus, electric conduits and wiring) of the U. S. post-office at Sewickley, Pa.

PITTSBURG, PA.—The Building Committee having in charge the erection of a Syr
temple for the Shriners in the Oakland
trict are getting the plans into shape
the construction work will be begun
a few weeks. The building will
less than $250,000, and accordin
plans now being perfected, the stru
face on two streets, and will hav
capable of seating not less than

FORT CASWELL (Southport
N. C.—Bids are asked until 5
by Lieut. William R. McClea
M., for construction, plumbin
wiring with fixtures two dou
ficers' quarters and one ordn
this post.

FORT MOULTRIE, S. C.—
by the Constructing Q. M.,
April 28, for constructing on
lery Engineer's office and
brick or reinforced concrete
and one brick, or reinforced
termaster's storehouse at Fo

KNOXVILLE, TENN.—DA
SONS have been awarded th
struct the Deaderick Ave.
the estimated cost of the
$50,000. The new church
ing capacity of 3,000. T
mittee is composed of the
M. Leek, Chn.; J. T. Mo
E. Weaver, John P. Matl
G. W. B. Gray, Lem Ande
J. H. Payne and S. G. K

*CATLETTSBURG, KY.
by James Knox Taylor, Su
ury Dept., Washington, D
May 19, for the con
plumbing, gas piping,

electric conduits and wiring), of the U. S. post-office and court-house at Catlettsburg, Ky.

LEXINGTON, KY.—James Knox Taylor, Superv. Arch. of the Treasury Dept., Washington, D. C., has awarded contract for the construction of an extension to the post-office building at Lexington, Ky., to FANCHER & DRISCOLL, Canastota, N. Y., at $68,135. Time, April 1, 1911.

ASHTABULA, OHIO.—Bids were received as follows on April 11 at the office of James Knox Taylor, Superv. Arch. of the Treasury Dept., Washington, D. C., for the construction of a post-office building at Ashtabula, Ohio: William H. Fissell & Co., 1133 Broadway, New York, $77,700; James de Vault & Son, Canton, Ohio, $77,500; R. S. Moore & Co., Danville, Ill., $72,275; M. P. Wells, Witherspoon Bldg., Philadelphia, Pa., $77,689; John G. Unkefer & Co., Minerva, Ohio, $75,377; Conners Bros. Co., Lowell, Mass., $75,800; Constable Bros. Co., Erie, Pa., $75,900.

COLUMBUS, OHIO.—Bids for the construction of the Tuberculosis Hospital for Franklin County, Ohio, were opened on April 8 by the Board of County Commissioners as follows: George A. Abernethy, $90,500; D. W. McGrath, $93,681; Simon Small & Co., Mansfield, $78,804; Francis Bros. Co., $73,740; J. W. Heckart, $88,546; L. S. Steward, $87,865. For the power plant: George A. Faber, $5,925; Erner-Hopkins Co., $5,465; D. W. McGrath, $5,925; Simonton Construction Co., $5,867; Electrical Construction Co., $5,776. Heating and plumbing: Hoffman-Conklin Co., heating system, $9,190, plumbing, $9,564; W. H. Conklin Co., heating system, $8,400; plumbing, $8,087.

OTTAWA, OHIO.—We are officially advised that Frank L. Packard, Hayden Bldg., has the plans ready for a $200,000 court-house at Ottawa. Plans will be on file at the Builders' Exchange, Columbus.

CLIFTON, OHIO.—The Roman Catholic Parish will erect a church on Clifton Ave., to cost $100,000.

CLEVELAND, OHIO.—The plans for the annex building of Cleveland Aerie, Order of Eagles, have been completed by George S. King, Arch., Central Trust Bldg., Cleveland. The structure will be of brick and cut stone, with two stories and a basement, and will be erected at a cost of approximately $50,000. The basement will be used as a gymnasium, fitted with athletic accessories and bowling alleys. The lodge room and auditorium will be on the first floor and will have a stage and gallery. A ballroom will occupy the upper story.

The actual work upon the organization of an Interurban Depot Co. will begin at once, according to the Cleveland "Leader." C. W. Burrows, Pres. of the Retail Merchants' Board, has appointed the committee which is to act upon the matter of interurban traction facilities. The committee is composed of Samuel H. Halle, of the Halle Bros., and N. L. Dauby, of the May Co., representing the Board; G. M. Dahl, Street Railway Comr., appointed by Mayor Baehr to represent the city; E. W. Moore, representing interurban road officials, and H. J. Davies, named by the officers of the Cleveland Railway Co.

LIMA, OHIO.—At his bid of $53,000 W. F. BRODBECK, of St. Marys, Ohio, has been awarded the contract for the construction of the tuberculosis hospital at Lima, in which the counties of Auglaize, Allen, Mercer, Van Wert and Shelby are interested.

SOUTH BEND, IND.—Dr. Franklin Miles, of Elkhart, has awarded a contract to L. A. HIEKEY, of this city, for the construction of a hotel, 20 cottages and a barn at Christina Lake.

CONNERSVILLE, IND.—James Knox Taylor, Superv. Arch. of the Treasury Dept., Washington, D. C., has awarded contract for the construction of a post-office at Connersville, Ind., to JAMES DE VAULT & SONS, of Canton, Ohio, at $55,166. Time, April 1, 1911.

RUMBLETOWN, IND.—The School Trustees will soon ask for bids for the construction of a high school building on the site of the building recently destroyed by fire.

CRAWFORDSVILLE, IND.—The School Board has ordered plans on which bids will be asked for the construction of a school building. Patton & Miller, Hartford Bldg., Chicago, are Archs.

GOSHEN, IND.—The Lake Shore & Michi-
Southern Ry. Co., has approved alter-
plans for the erection of a freight
in this city. Samuel Rockwell
l, Ohio, is Ch. Engr.

T, MICH.—We are officially ad-
Stratton & Baldwin, Archs., 1103
Bldg., Detroit, have been com-
the Harper General Hospital
repare plans and specifications
building to be built on a site
milton Boulevard. The Harper
tal Association has been in-
pitalized at $2,500,000. J. L.
ot Ave. and Farmer St., and
80 Griswold St., are Trustees.
l report, W. C. Brown, Pres.
an Central R. R. Co., an-
quisition by that company of
etroit upon which will be
nger station.

CH.—George H. Keys, 203
Detroit, is letting contracts
partment house, 58 × 70 ft.,
e apartments. Press and
ford cut stone, composition
iling will be used in con-

HIGGINBOTHAM, Archs.,
., Detroit, are preparing
cations for the proposed
3-story and basement, 269
$200,000. The Board of
. Lee, Secy., 50 Broadway
bids soon.

rchs., 604 Whitney Bldg.,
the general contract for
l Morgan to CARL SYL-
s St., Detroit.

s, Arch., 48 Rowland Bldg., Detroit, is letting contracts for a theatre for A. A. Caille, 34 Farmer St., Detroit. It will be constructed of press and stock brick, Bedford stone, composition roofing. Electric fixtures will be installed.

Harry Hill, Arch., 54 Buhl Block, Detroit, has prepared plans and specifications for a parochial residence with three stories and basement, 49 × 55 ft., for Rev. Fr. James Wheelor, 797 Larned St., East. Press and stock brick, Bedford cut stone, galvanized iron skylight and cornice, mosaic tiling, mantels and electric fixtures will be used in construction.

Smith, Hinchman & Gyrlls, Archs., 710 Washington Arcade Bldg., Detroit, are receiving bids for a 3-story store building, 52 × 139 ft., for A. T. Knowlson, 58-60 Congress St., East. Construction will be of paving and stock brick, Bedford cut stone, composition roofing, structural iron and electric fixtures will be included in the equipment.

Albert Kahn & E. Wibly, Archs., 800 Trussed Concrete Bldg., Detroit, have let the following contracts for the proposed 6-story and basement store and office building, 100 × 100 ft., for the Thomas W. Palmer Estate, C. M. Harmon, Mgr., 610 Wayne County Savings Bank Bldg.: Carpentry, to SCHMIDT-SISMAN CO., 319 Beaufait St.; composition roofing, to J. D. CANDLER & CO., 177 High St.

BELLEVILLE, ILL.—Bids are asked by James Knox Taylor, Superv. Arch., Treasury Dept., Washington, D. C., until 3 p. m., May 16, for a plumbing and drainage system at the U. S. post-office, Belleville.

CHICAGO, ILL.—William Borden has purchased the vacant lot, 60 × 80 ft., at the southeast corner of Adams and Clinton Sts., and will improve it with a 7-story building to be leased to Florsheim & Co., Adams and Clinton Sts., whose plant adjoins on the east. The building is expected to cost in the neighborhood of $150,000.

Henry C. Lytton, Pres. of the Hub, intends to erect two buildings. One of the buildings is to be erected at the northeast corner of Jackson Boulevard and State St. by Mr. Lytton personally. He has secured a 99-year lease on the property, which has a frontage of 80 ft. on State St. and 144 ft. on the boulevard, and will erect thereon a 20 or 22-story building, costing $1,000,000. The other project is for a building to house The Hub. This property comprises an entire block, 165 ft. on the west side of State St., between Jackson Boulevard and Quincy St. The greater part of the ground is owned by the Otis Estate, but 40 ft. is owned by Levy Mayer. It is yet to be decided by the managers of the Otis Estate whether the new structure shall be eight or ten stories, for the use of The Hub, or 18 or 20, with offices on the upper floors. The lower building, if it is erected, will cost about $1,000,000, and if the taller one is decided on the cost will be doubled. In any event, the foundation will be made strong enough to carry a 20-story structure, so that if the lower building is erected more stories may be added to it later on. Mr. Lytton's building will contain three stores on the ground floor, and the remainder of the structure will be devoted to offices. The plans for it have been drawn by Marshall & Fox, First National Bank Bldg.

QUINCY, ILL.—James Knox Taylor Supervising Arch. of the Treasury Dept., Washington, D. C., has awarded contract for the construction of an extension to the post-office at Quincy, Ill., to PAUL RIESEN'S SONS, University Bldg., Milwaukee, Wis., at $79,000; April 1, 1911.

DES MOINES, IOWA.—Des Moines Consistory of Masons has adopted resolutions authorizing the Board of Trustees of the four lodges in the consistory to have plans prepared for the erection of a Masonic Temple at West 14th and High Sts. After the plans and specifications are completed the Trustees will submit them to the four Masonic bodies and if approved by each the actual work of construction will begin on April 1, 1911. The temple will cost about $300,0000. Lewis M. Garret is interested.

MELROSE, MINN.—Bids will be received by Rev. B. Richter, until April 19, for the construction of a pressed brick and cut-stone parochial school to be built here, according to plans of E. J. Donohue, Arch., Gilfillon Block, St. Paul, Minn. It will be three stories high, with steam heating, electric wiring and composition roof. Cost, $40,000.

CROOKSTON, MINN.—The State Board of Control, Charles Halvorson, St. Paul, Minn., Chn., has awarded the contract for the construction of a 3-story pressed brick and cut stone fireproof ladies' dormitory at the State Experimental Farm at Crookston, to CHRISTOPER EICKOFF, of Crookston. Cost, $40,000.

MINNEAPOLIS, MINN.—JAMES LECK, 311 South Seventh St., has been awarded the contract for the 7-story warehouse which the Parlin & Orendorff Plow Co. will erect at Washington and Seventh Aves., N., according to plans by Bertrand & Chamberlain, Archs., Bank of Commerce Bldg. It will be 150 × 150 ft., of reinforced-concrete construction, with brick exterior, steam heat, electric wiring, plumbing, elevators. The office floor will be plastered, finished in hardwood and will have hardwood floors. Contracts for the plumbing and lighting are still to let. Cost, $200,000.

BRAINERD, MINN.—James Knox Taylor, Superv. Arch. of the Treasury Dept., Washington, D. C., has awarded contract for the construction of a post-office at Brainerd, Minn., to J. W. MILLER, of St. Paul, Minn., at $42,952. Time, April 1, 1911.

WILLMAR, MINN.—The State Board of Control, Charles Halvorson, Chn., is taking bids for the construction of brick and cut stone buildings at the state hospital for inebriates at Willmar, Minn. Cost, $100,000. The Board is also receiving figures for the building of the state industrial school for girls at Sauk Center, Minn. C. H. Johnston, Manhattan Bldg., St. Paul, is Arch.

FORT RILEY, KAN.—Bids are asked by Capt. W. M. Whitman, Constr. Q. M., until 10 a. m., April 15, for reconstruction of Artillery Stable No. 76, at Fort Riley, Kan. Bids will also be received for the installation of the electrical work.

INDEPENDENCE, MO.—Bids were received as follows on April 5, by James Knox Taylor, Superv. Arch. of the Treasury Dept., Washington, D. C., for the construction of a post-office at Independence, Mo.: Carl A. Nilson, Kansas City, Mo., $75,000; A. J. Middleton & Son, Scarritt Bldg., Kansas City, $75,299; Frank H. Lattimer, Kansas City, Mo., $72,243; King Lumber Co., Charlottesville, Va., $74,870; Hiram Lloyd Building & Construction Co., Odd Fellows' Bldg., St. Louis, Mo., $71,000; Kansas & Missouri Construction & Supply Co., Kansas City, Mo., $79,964.

FORT BLISS, TEX.—Bids are asked until noon, May 4, by Capt. W. H. Waldron, Construction Q. M., Fort Bliss, for constructing, plumbing, heating and electric wiring officers' quarters at this post.

MONTESANO, WASH.—The Chehalis County Commissioners have let contract for a jail building to be erected in conjunction with the court-house, for $65,000 to SYLLIAASEN & SANDS, who have the contract for the court-house.

TACOMA, WASH.—The Mother Superior of St. Joseph's Hospital has stated that plans are under way for an addition to the hospital, that will give it double the present capacity, to cost between $50,000 and $60,000. The hospital is under the charge of the Sisters of St. Francis.

KLAMATH FALLS, ORE.—The Klamath Development Co. has formed plans for the erection of a hotel on the triangle opposite its offices in this city, a few blocks northwest of the Southern Pacific Depot. The incorporators are: Major Charles E. Worden, William S. Worden and P. B. Houston. Mr. P. B. Houston will have charge of the construction. The capital of the company has been placed at $100,000, and the articles of incorporation have been filed with the Secretary of State. The hotel will have electric elevators, telephones in all the rooms, and will be heated with natural hot water from medical springs. It will be called The Harriman.

MONTREAL, QUE.—The general contract for the erection of the school for the Sisters of the Holy Cross, on St. Hubert St., has been awarded to T. LESSARD & SONS, Ltd., 191 Craig St., East, Montreal. Joseph Sawyer, 407 Guy St., Montreal, is Arch.

TORONTO, ONT.—The Trustees of the Toronto General Hospital intend to construct a hospital on College St to cost about $2,500,000. J. W. Flavelle is Chn. of Trustees; Darling & Pearson, 2 Leader Lane, Toronto, are Archs.

WINNIPEG, MAN.—The contract for the general construction of the Orpheum Theater on Fort St., has been awarded to HAZELTON & WALLIN, of Chicago, Ill., at $150,000. It is stated that the MANITOBA BRIDGE CO. will furnish the steel, and DUNN BROS. the face brick, terra-cotta and ornamental iron work. Contracts for plumbing, heating and lighting have not yet been placed. J. D. Atchison is Arch., Bank of Toronto Bldg., Winnipeg; Kirchhoff & Rose, Pittsburg, Pa., are Associate Archs.

The contract for the proposed Methodist Church, to be erected on the corner of Broadway and Furby Sts., by the Young Church Congregation has been let to CLARK & MITCHELL. James Chisholm & Son, McDermott and Albert Sts., are Archs. Cost, $70,000. Contracts for finishing work, amounting to $8,000, will be let later.

A permit has been granted for the erection of a 4-story apartment block to the Rostrevor Apartment Building Syndicate. Cost, $350,000. The dimensions are 200 × 145 ft. W. W. Blair is Arch., Nanton Bldg., and the G. H. WALTON CO. has the contract. Construction will begin at once.

WINNIPEG, MAN.—The contract for the Lord Roberts' School, in the Rosedale district, of Fort Rouge, has been let to J. H. TREMBLAY & CO., St. Jean Baptiste St., St. Boniface, Man., at $76,000. Work on the contract will begin at once. The plans of the proposed collegiates were also under consideration.

A. B. Kent has secured permit to erect an apartment block on corner St. Marys and Colony Sts., costing $50,000.

SASKATCHEWAN, SASK.—We are officially advised that the contracts for the University buildings have been let provisionally. The successful contractors are SMITH BROS. & WILSON for the buildings, etc., and BALLANTYNE & CO., for power, heating and plumbing. The address of the former firm is Regina, and of the latter Winnipeg. Walter C. Murray is Pres.

WATER-SUPPLY—IRRIGATION.

(* *denotes that this work is advertised in Engineering News.*)

HINSDALE, N. H.—The citizens have voted to install a fire service, consisting of about two miles of 12, 10, 8 and 6-in. pipe with 34 hydrants, to be connected with and filled by five high-pressure pumps at the various paper mills and factories in the village. Dudley & Sawyer are Engrs., Manchester, N. H.

LYNN, MASS.—Bids will be received until 2.30 p. m., April 15, by the Metropolitan Water & Sewerage Board, 1 Ashburton Pl., Boston, Henry H. Sprague, Chmn., for laying 4,720 ft. of 16-in. c.-i. water pipe in Lynn.

SMITHFIELD, R. I.—Bids will be received by the Woonasquatucket Reservoir Co., care of Edwin P. Dawley, Consulting Engr., 532 Banigan Bldg., Providence, until April 20, for building a dam in Smithfield.

*STAPLETON, S. I., N. Y.—Bids are asked by the Board of Water Supply, 299 Broadway, New York, until 11 a. m., April 28: For Contract 82, for furnishing and delivering on a designated dock at Stapleton, approximately 3,800 tons of 36-in. c.-i. flexible-jointed water pipes, to be used in the construction of the Narrows Siphon, a portion of the Catskill Aqueduct, in New York Harbor. John A. Bensel is Pres.

NEW YORK, N. Y.—Bids are asked by Henry S. Thompson, Comr. of Water Supply, Gas and Electricity, until 2 p. m., April 21, for furnishing and delivering brass well strainers and fittings, and for furnishing and delivering genuine w.-i. pipe and fittings.

NEW YORK, N. Y.—Bids are asked by the Board of Water Supply until 11 a. m., April 28, for Contract 34, for water mains at Jerome Ave. pumping station, Borough of The Bronx.

TRENTON, N. J.—George W. Fuller, 170 Broadway, New York, submitted to the Water Commissioners on March 31 plans for the proposed filtration plant, which will have a daily capacity of 30,000,000 gals.

NEW BRUNSWICK, N. J.—The Water Commissioners on April 5 awarded contract to R. D. WOOD & CO., 400 Chestnut St., Philadelphia, Pa., for furnishing pipe for the year.

*FORT HANCOCK, N. J.—We are officially advised that bids were received as follows by C. T. Goodier, Construction Q. M., U. S. A., on April 6, for the construction of a pumping plant and installation of machinery at Fort Hancock. Construction of building and stack: Alamo Construction Co., New York, $22,300; Robert J. Walsh, Highlands, N. J., $21,000; John W. Danforth Co., Buffalo, N. Y., $25,875; J. L. Sweigard & Co., Philadelphia, Pa., steel stack $1[illegible], alternate bid $3,868; McHarg-Barton Co., New York, $25,961; North Eastern Construction Co., New York, $32,277; Daniel J. Ryan, Brooklyn, N. Y., $19,230; N. J. Foundry & Machine Co., New York, $24,33[illegible]; Edward Fay & Son, 1521 Ranstead St., Philadelphia, Pa., $19,190. Boilers, machinery, piping, etc.: John W. Danforth Co., Buffalo, $14,743; J. L. Sweigard & Co., Philadelphia, $21,996, alternate $17,762; M. L. Bayard & Co., Philadelphia, $17,450; McHarg-Barton Co., New York, $16,870; North Eastern Construction Co., New York, $15,41[illegible]; N. J. Foundry & Machine Co., New York, $14,446, alternate, deduct $1,250; A. D. Granger Co., 90 West St., New York, $11,945; Edward Fay & Son, Philadelphia, $12,300; Walworth Mfg. Co., Boston, Mass., $17,200. Construction, plumbing, boilers, machinery, piping, etc.: John W. Danforth Co., Buffalo, $3[illegible]865; G. & W. Mfg. Co., New York, $37,43[illegible], alternate $36,743; McHarg-Barton Co., New York, $41,840; Daniel J. Ryan, Brooklyn, $38,800; Edward Fay & Son, Philadelphia, $31,715.

ERIE, PA.—Ten bids were received on April 2 by the Water Commissioners for supplying a carload of pig lead to be used for laying of a 12-in. main to the General Electric Co. plant and on other new pipe lines in the city. Contract was awarded to CHARLES S. TRENCH & CO., 81 Fulton St., New York, at 4⅜ cts. per lb.

LIGONIER, PA.—See item under Sewerage.

HANCOCK, MD.—The city voted on April 4 to issue $30,000 of bonds for the construction of water-works.

NORTH EAST, MD.—Bids are asked by G. A. M. Johnson, Leslie, Md., Pres. of company, noted on March 24, as organized to construct water-works, until June 1, for construction of 100,000-gallon clay-lined reservoir.

ORANGE, VA.—Bids are asked until noon, April 22, by the Mayor and Board of Trustees for furnishing materials and labor and for performing all work necessary for the construction of water-works for the town. Frank B. Perry is Mayor.

WILLIAMSON, W. VA.—The city will construct a filtration plant and enlarge the reservoir and will install filtration machinery. Estimated cost, $15,000.

KEYSER, W. VA.—The Town Council on April 4 instructed the Water Committee to employ an engineer to estimate the cost of extending a water line to a point above North Creek.

THOMASVILLE, N. C.—The city has engaged J. B. McCrary & Co., Empire Bldg., Atlanta, Ga., to make a survey and estimate the cost of constructing water-works.

FORT MORGAN, ALA.—Contract for the construction of a reinforced concrete cistern for two barracks, and for two 8,000-gallon cisterns for officers' quarters at Fort Morgan, has been awarded to W. C. P. PEASE, of Atlanta, Ga., at $4,790.

HARTSELLE, ALA.—The city has engaged Xavier A. Kramer, Magnolia, Miss., as consulting engineer to plan the construction of water-works.

CRYSTAL SPRINGS, MISS.—Bids will be received by W. E. Biggs, City Clk., for constructing a 100-ft. steel tower and 125,000-gallon steel tank. C. Plummer is City Engr.

BROOKSVILLE, MISS.—We are officially advised that G. B. Baskerville, Jr., Macon, Miss., has been employed by the City Council as consulting engineer to draw plans and specifications and supervise the construction of a water-works system.

WELSH, LA.—The city will construct a water-works system. A. T. Jones is Mayor.

DAYTON, OHIO.—Bids will be received until April 18 by the Department of Public Service, William A. Budroe, Secy., for drilling six 8-in. wells in bed of the Great Miami River between Keowee St. and the aqueduct.

ALLIANCE, OHIO.—Bids are asked until noon, April 15, by the Director of Public Service, for furnishing c.-i. water pipe and specials for extending the service mains of the water-works system. J. F. H[illegible]gan is Clk.

HILLSBORO, OHIO.—Bids are asked by the Board of Trustees of Public Affairs until 7 p. m., April 26, for furnishing and placing service pipes to curb. A. E. Miller is Secy.

FORT WAYNE, IND.—The Board of Public Works has awarded contract, it is reported, to the PITTSBURG METER CO., East Pittsburg, Pa., for about 9,000 meters.

MILWAUKEE, WIS.—Bids are asked until 10.30 a. m., April 22, by the Board of Public Works, for the repair of the intake crib located in Lake Michigan about 3,200 ft. east of the North Point pumping station, 18th Ward.

MINNEAPOLIS, MINN.—The City Council on April 1 adopted the report of Rudolph Hering, 170 Broadway, New York, on the proposed new water supply, which recommended mechanical filtration of the Mississippi River water.

DETROIT, MINN.—Contract for the extension of the water mains here has been let to JAMES A. TRANE, of La Crosse, Wis., at $11,741. The contract calls for laying 10,000 ft. of 6 and 8-in. water mains with 14 hydrants and necessary valves. L. P. Wolff is Engr., Essex Bldg., St. Paul.

TOPEKA, KAN.—The Water-Works Department will lay about 15,000 ft. of new mains and extensions this year.

COLUMBUS, KAN.—T. C. BROOKS & SONS CO., Jackson, Mich., have been awarded contract at $6,078 for water main extensions. Bids were opened on March 21.

WYNCOTE, WYO.—The Secretary of the Interior has approved the award of the following contracts for excavation of portions of the lateral system under the North Platte irrigation project, Nebraska-Wyoming: To EDDIE E. MADSEN, of Minatare, Neb., for the excavation of approximately 9,600 cu. yds. of material at $1,104; to J. F. McALLISTER, 31,900 cu. yds. of excavation at $3,515.

LEBANON, MO.—The citizens on March 29 voted to issue $20,000 of bonds for improving the water and lighting plants. T. B. Burley is City Clk.

FORT CROCKETT (Galveston post-office), TEX.—KELSO & VAUTRIN, Galveston, Tex., have been awarded contract at $5,900 for the construction of the water-distribution system. The work includes 200 ft. 4-in. c.-i. pipe; 6,050 ft. 6-in. c.-i. pipe; 250 ft. 8-in. c.-i. pipe; 1,070 ft. 1-in. to 2-in. g.-i. pipe; 16 fire hydrants; three park hydrants; one crane. Capt. P. Whitworth is Construction Q. M., U. S. A.

VALENTINE, TEX.—The city has awarded contract to THOMAS DEAN, of Alpine, Tex., for constructing water-works.

BRISTOW, OKLA.—The city has voted $7,500 of bonds for the extension of water-works and $9,500 for water-works refunding.

ANADARKO, OKLA.—Bids are asked by C. C. McKnight, City Clk., until 5 p. m., April 18, for furnishing all the material and labor required for the Highlands water extension.

POTEAU, OKLA.—See item under Light and Power Plants.

ALTUS, OKLA.—See item under Light and Power Plants.

LONGMONT, COLO.—The Arbuckle Reservoir Co. filed articles of incorporation on April 1. The directors are: C. P. Howard, T. N. Callahan, A. L. Gibson, Joe Lee and J. D. Bashor, all of Longmont. The capital stock of the company is $25,000. It was organized to acquire a system of reservoirs in Boulder County, near the base of Long's Peak.

DENVER, COLO.—The Boyd Lake Reservoir & Irrigation Co. was incorporated on March 30 at the office of the Secretary of State by Burton D. Sanborn, Halsted L. Ritter and Joseph C. Helm. The company owns a large reservoir near Loveland, and proposes to furnish water for the irrigation of lands in Larimer and Weld Counties.

ORIENT, WASH.—It is proposed to organize and incorporate an irrigation and electric light and power company here in a few months, with a capital of $300,000. No development work has as yet commenced. J. L. Leeper, of Orient, is interested.

QUINCY, WASH.—The engineer of the Quincy Valley Water Users' Association has made a preliminary survey of a system to bring water for the irrigation of 480,000 acres, known as the Quincy Valley, and completed his report. He investigated five plans of putting water on the area, and favors bringing water from the Wenatchee River and lake at an aggregate cost of $28,672,783, or $98.83 per acre for watering 290,000 acres. This supply would have to be siphoned under Columbia River in a tunnel 100 ft. beneath its bed.

TACOMA, WASH.—The NORTHWEST BRIDGE CO., of Tacoma, has secured the contract for constructing a steel standpipe. Bids were opened on March 15 by the Water Department.

KENT, WASH.—Bids will be received until April 18 by the city for the construction of a pipe line from the springs, to cost $73,000. L. E. Price is City Clk.

ELLENSBURG, WASH.—Articles of incorporation have been filed by the South End Water Co., with the principal place of business in this city. Objects are to construct, operate, equip, maintain and renew a system for the supply of water to such parts of Ellensburg and territory adjacent as it shall obtain franchise for. Incorporators' are: George De Wees, Charles Anderson and J. W. Gilliam.

VALE, ORE.—F. GRANT, of Liberty, Tex., has secured the contract for the ditch work of the Willow River irrigation project near the new town of Brogan, which will bring 20,000 acres of land under cultivation. About $200,000 will be expended.

RIVERSIDE, CAL.—C. A. Stice, Charles S. McKelvey and F. List McMeachem have each filed on 200,000 ins. of water in Colorado River, the water to be taken by pumps and intake for irrigation, domestic and power purposes.

BANNING, CAL.—WILLIAM E. PEDLEY has secured contract, it is reported, for constructing a flow for the purpose of diverting water of White Water River at an elevation of 7,000 ft. in the San Bernardino Mountains to the lands of the Consolidated Reservoir & Power Co., at Banning, the flow to be five miles long, partly open concrete canal, and balance 40-in. concrete pipes. Four power plants will be built by the company. George I. Lamy is Ch. Engr., Los Angeles.

LOS ANGELES, CAL.—We are officially advised that the Board of Water Commissioners awarded contract on April 4 to the U. S. CAST IRON PIPE & FOUNDRY CO. for furnishing standard bell and spigot and flange and c.-i. water pipe. Unit prices are given under Contract Prices.

Contracts for two 20-in. Renssalaer gate valves (flange) side gear and for H. E. gate valves were awarded to the PACIFIC COAST SUPPLY CO. and the CRANE CO., of Los Angeles, respectively.

CALDWELL, IDAHO.—Bids are asked, it is reported, until April 19, for the water-works improvements. C. J. Shorb is City Clk.

BOISE, IDAHO.—The IDAHO CONSTRUCTION CO., F. W. Monarch, Pres., has been awarded contract for the reconstruction of the dam and irrigation ditches at Grandview at about $25,000.

The Warm Springs Irrigation Co. has been incorporated with a capital of $250,000 by Henry T. Hill and others.

WEISER, IDAHO.—Bids will be received by the Crane Creek Irrigation, Land & Power Co. until 3 p. m., April 16, for the construction of the company's dam, canals, flumes and laterals. For further information apply to the manager of the company at Weiser.

BELLEVILLE, ONT.—See item under Light and Power Plants.

TORONTO, ONT.—Bids will be received until April 15, extension of date from April 5, by G. R. Geary, Mayor and Chn. Board Control, for supplying 1,000 ft. of riveted steel pipe, 72-in. in diameter, and also 20 flexible joints.

VANCOUVER, B. C.—The Pitt Meadows Land Co., composed of Vancouver capitalists, has let contract for dyking 6,000 acres of land in the Pitt Valley to RANNIE & CAMPBELL, of Vancouver, at about $100,000.

CALGARY, ALTA.—Bids will be received until noon, May 1, by J. S. Dennis, Asst. to the Second Vice-President, Canadian Pacific Ry. Co., Calgary, for all excavation required to complete the canal system in the eastern section of the company's irrigation block in Alberta, amounting to about 25,000,000 cu. yds. of material. Plans and specifications are on file at office of Engineering News, New York.

SEWERAGE.

(* *denotes that this work is advertised in Engineering News.*)

KENNEBUNK, ME.—Bids will be received by the Town Selectmen until April 16 for laying about 4,500 ft. of pipe sewers, 6 to 24 ins. in diameter; eleven manholes, and five catch basins.

BEVERLY, MASS.—Harry L. Whitney, City Engr., is preparing plans for a sewerage system with a deep sea outfall. Estimated cost, $500,000.

REVERE, MASS.—Bids are asked until 8 p. m., April 20, by the Sewer Commissioners for furnishing sewer pipe. Whitman & Howard are Engrs., 220 Devonshire St., Boston.

HARTFORD, CONN.—Bids for the construction of about 3,800 lin. ft. of brick or concrete sewer, 4 ft. 6 in., 4 ft. 3 in., and 3 ft. in diameter in the Homestead Ave. interceptor system were received by the Board of Contract and Supply on April 11 as follows: (a) concrete; (b) brick; (c) concrete with brick: Ryan-Unmack Co., New Haven, (a) $22,033, (b) $31,142, (c) $26,651; Bernardino & Silvestri, Hartford, (a, b, c) $26,897; A. W. Byrne, Boston, Mass., (a, b, c) $26,985; Charles H. Slocomb, Hartford, (a) $27,042, (b) $30,167, (c) $27,042; F. B. & W. H. O'Neil, Hartford, (c) $27,800; Hartford Paving & Construction Co., Hartford, (a) $33,214, (b) $37,794, (c) $39,331; F. T. Ley Co., Springfield, Mass., (a) $43,737.

NEW YORK, N. Y.—Bids are asked by George McAneny, Pres. Boro. Manhattan, until 11 a. m., April 20, for furnishing all the labor and materials required for sewer and appurtenances in Tompkins St., between Rivington and Houston Sts.; for furnishing all the labor and materials required for reconstruction of sewer and appurtenances under pier (old) 8, North River; for furnishing all the labor and materials required for receiving basins on both sides of Nagle Ave., about 270 ft. north of Dyckman St., and on the southeast corner of Nagle and Hillside Aves.

Residents of Woodside, in the Second Ward of the Borough of Queens, on April 6 voted to organize themselves into a company and build their own sewers. It is estimated that it will take $30,000 to build the sewer system needed. Louis Windmuller, of Woodside, is interested.

NEW YORK, N. Y.—Bids are asked by George McAneny, Pres. Boro. Manhattan, until 11 a. m., April 23, for furnishing all the labor and material required for repairs to sewer and appurtenances in 110th St., at Manhattan Ave.

*COMSTOCK, N. Y.—The bids received on April 5 by C. V. Collins, Supt. State Prisons, for the construction of a sewage disposal system at the Great Meadow prison at Comstock, were: Hudson Valley Construction Co., Troy, N. Y., $7,734; New York Sewage Disposal Co., New York, $10,910; John M. Holler, Albany, N. Y., $11,445; M. Fitzgerald, Hoosick Falls, N. Y., $9,125; Welles-Boughton & Co., Troy, $8,966; Thomas Dunn, Saratoga, N. Y., $12,200; Kennedy & Easton Construction Co., Albany, $12,785; Wing, Reixinger & Wing, Buffalo, N. Y., $11,590; Eveline Bros., Waterford, N. Y., $9,480; Charles R. Lewis, Ilion, N. Y., $11,497. F. B. Ware is State Arch.

ROCHESTER, N. Y.—The Board of Contract and Supply has awarded contract to WILLIAM H. SOURS, Rochester, at $21,027, for the construction of the Humboldt St. and other street sewers in the 21st Ward.

AMSTERDAM, N. Y.—Bids will be received by the Sewer Commissioners until 8 p. m., April 20, for furnishing all the materials and constructing complete a 15-in. storm sewer in Wall St., from Spring to Greene Sts., together with the necessary manholes and catch basins. A. T. Young is Secy.

SYRACUSE, N. Y.—Contract for the construction of the new trunk sewer in the 17th Ward will be let in about six weeks. The sewer will extend from the end of the present trunk sewer at East Colvin St. and the Lackawanna tracks to Ackerman Ave. and Poplar St.

FULTONVILLE, N. Y.—The village proposes to spend about $17,000 for the construction of sewers. W. H. Van Wil is Village Engr.

RIDGEWOOD, N. J.—The Board of Chosen Freeholders at Ridgewood on March 28 decided to do away with 18 culverts and join with the village in the construction of a storm water sewer. Estimated cost, about $25,000.

HOBOKEN, N. J.—The lowest bid opened by the City Council on March 23 for rebuilding First St. sewer was submitted by Thomas Kavanagh, at $24,992.

PLAINFIELD, N. J.—The State Senate has passed the bill authorizing Plainfield and North Plainfield to construct a joint outlet sewer and disposal works near Beechwood Borough.

WESCOSVILLE, PA.—The Board of Commissioners of Lehigh County is having plans prepared for a sewage disposal plant for the Lehigh County Home at Wescosville. Estimated cost, approximately $20,000. The contract includes collecting basin, filter beds, pipe lines, etc. R. S. Rathbun is Engr., Allentown.

LIGONIER, PA.—We are officially advised that F. H. Shaw, of Lancaster, Pa., has been employed to prepare plans for a sewerage system and a sewage disposal plant for Ligonier; also to prepare plans for the enlargement of the municipal water-works system. Ira F. Brant is Clk.

BRADFORD, PA.—See item under Streets and Roads.

BALTIMORE, MD.—The State Legislature has passed an enabling act for a $10,000,000 loan to complete the sewer system. It is expected to put the loan to vote of the people soon.

CUMBERLAND, MD.—Bids are asked until noon, April 16, by the Street and Alley Committee for constructing four sections of a reinforced-concrete storm water sewer in Dry Run, at Decker's Alley, Highland St., Columbia St. and Valley St., and relaying a 12-in. terra cotta pipe sewer.

ROANOKE, VA.—Bids will be received until noon, April 26, by the city for constructing 24-in. sewer-drain in Luck Ave. F. L. Gibboney is City Engr.

REIDSVILLE, N. C.—Bids will be received until 8 p. m., April 21, by L. H. Hardy, Jr., Town Clk., for sewer system requiring about ten miles vitrified pipe sewers, from 8 to 15 ins. diameter; three sewage pumping stations, and a reduction tank. F. W. Myers is Engr., Greensboro, N. C.

ATLANTA, GA.—Druid Hills Co., O. F. Kaufman, Ch. Engr., has awarded contract to the DYSARD CONSTRUCTION CO., Atlanta, for the construction of seven miles of sewerage.

MADISON, FLA.—The city has awarded the contract to the DYSARD CONSTRUCTION CO., Atlanta, for nine miles of sewer and erection of a disposal plant. H. S. Jaudon, Box 582, Savannah, Ga., is Engr.

NEW DECATUR, ALA.—Bids will be received until 7.30 p. m., April 15, by the City Council for constructing sanitary sewer laterals provided for under improvement ordinances Nos. 184, 185, 186 and 187. Henry Harting is City Clk.

BIRMINGHAM, ALA.—Bonds for $440,000 for the construction of the two large north side sewers have been guaranteed and bids on the work will be advertised at once. The plans for the sewers have been made for some time and the city provided for the cost by the measure recently adopted by a vote of the people for the issue of $400,000 bonds for sewers. Half of the construction cost will be taxed against the property owners of the district drained. Two sewers will be built. The main sewer will follow Ninth alley north, starting at 30th St. and emptying into Valley Creek at Walker St. near Fifth Ave. and Seventh St. This sewer will cost $300,000. The second and smaller sewer will extend from Ave. C and 28th St., after crossing the railroad at 25th St., down Second alley to 14th St., where it will branch off to meet the other sewer. This branch will cost $140,000. The main sewer will vary in size from a 24-in. pipe to a size of 8½ × 14 ft., the other from 18 ins. to 8 × 12 ft. The two sewers together drain the city from Ave. B, north, to 13th Ave., and from 30th St. west.

MERIDIAN, MISS.—The city proposes to spend from $16,000 to $20,000 for the extension of sewers. Nothing definite will be done for about 90 days. W. G. Wetmore is City Engr.

BELZONI, MISS.—Bids will be received until May 17 by the Mayor and Aldermen for a system of house sewers, between three and four miles of 8-in. and 10-in. pipe sewers, with centrifugal pump and motor. For specifications and information address Walter G. Kirkpatrick, Engr., Jackson, Miss.

LOUISVILLE, KY.—James Ferry & Son, Pittsburg, Pa., were the lowest bidders on April 1 for the construction of Sec. A of Frankfort Ave. sewer, Contract 63. Estimated cost, $75,000. J. B. F. Breed is Ch. Engr.

JACKSON, OHIO.—Plans for sewage purification works are being prepared by W. H. Monahan, Village Engr., of intermittent sand filter type preceded by sedimentation.

LORAIN, OHIO.—Bids are asked until noon, April 23, by the Director of Public Service for the construction of sewers. L. B. Johnston is Clk. Bd.

DAYTON, OHIO.—The Board of Control has approved the contract of JOHN WROE for the construction of the Springfield St. storm water sewer, at $3,255.

STEUBENVILLE, OHIO.—Bids are asked by the Board of Public Service until noon, April 18, for a sewer in Railroad Ave. R. L. Freudenberger is Clk.

SOUTH BEND, IND.—The Board of Public Works is asking for bids for the construction of a sewer in Campau St.

DETROIT, MICH.—The Department of Public Works has awarded contract to JOHN S. AFFELD, 761 Campbell Ave., for a brick public sewer in Concord Ave., at $10,817.

LANSING, MICH.—Bids will be received by the City Clerk until April 18 for the construction of about 8,700 ft. of sewers. Estimated cost, $40,000. H. A. Collar is City Engr.

DETROIT, MICH.—Bids will be received by Mason L. Brown & Co., Engrs., 821-823 Chamber of Commerce Bldg., Detroit, for the construction of 1,200 ft. of 12-in. sewer in McKinley Boulevard, at Grosse Point Farms. Plans and specifications at office of engineers.

OSHKOSH, WIS.—Bids will be received by E. S. Ostertag, City Controller, until April 20 for the construction of 3,800 ft. of vitrified tile sewers.

BELOIT, WIS.—The Board of Public Works has let contract to the O'FARRELL CONSTRUCTION CO., Dubuque, Iowa, at $8,815, for the construction of 2½ miles of sewers. Bids were opened on March 3. Robert Caldwell is City Engr.

RICE LAKE, WIS.—Contract for constructing sewers, bids opened on March 5, has been awarded to PASTORET & LAWRENCE, of Duluth, Minn., at $53,401. H. L. Gardner is Chn. Bd. Pub. Wks.

CEDAR RAPIDS, IOWA.—Bids will be received until 7.30 p. m., April 18, for the construction of sewers in three streets. P. F. Gray is City Clk.

HAYS, KAN.—W. K. Palmer & Co., Engrs., Dwight Bldg., Kansas City, Mo., have prepared plans for a system of vitrified pipe sewers for Hays. Estimated cost, $60,000.

PEABODY, KAN.—We are officially advised that on April 5 contract for constructing four miles of main and lateral sewers, together with one reinforced-concrete septic tank, at Peabody, was awarded to MARSHALL BROS., of Los Animas, Colo., at $1,706. J. W. Mavity, Lyndon, Kan., is Engr.

MARION, KAN.—Bids are asked until 8 p. m., April 18, by the City Clerk for the construction of a reinforced-concrete septic tank, according to plans on file at the office of City Clerk, also, alternate plans will be received. All plans to be approved by the State Board of Health. J. W. Mavity, Lyndon, is Engr.

LINCOLN, NEB.—H. C. GARDNER has secured contract, at $3,945, for the construction of a sanitary sewer in the vicinity of Sunlight hospital.

MANDAN, N. DAK.—Bids will be received about May 1 for the construction of a sewer system from the plans of R. E. Wickham, of Grand Forks. Estimated cost, about $40,000.

ST. LOUIS, MO.—Bids will be received by the Board of Public Improvements after April 25 for two sections of the River Des Peres sewer, reinforcements, also for the North Harlem Creek Joint Sewer District, concrete and vitrified pipe. Estimated cost, $1,000,000 and $400,000, respectively. W. B. Dryden is Secy.

CENTRALIA, MO.—The FREEBORN ENGINEERING & CONSTRUCTION CO., Kansas City, Mo., has secured contract for the construction of a system of sanitary sewers, including disposal plant. Burns & McDonnell are Engrs., Scarritt Bldg., Kansas City, Mo.

PALESTINE, TEX.—The Palestine Sewer Co. has awarded contract to TRUEHEART & JACKSON, of San Antonio, Tex., for constructing four additional miles of sewers.

TAHLEQUAH, OKLA.—Contract for the construction of sanitary sewers has been awarded to the SOUTHWESTERN CONSTRUCTION CO., of Oklahoma City, at $26,960. Smedley & Manlove are Engrs.

ALTUS, OKLA.—See item under Light and Power Plants.

OKLAHOMA CITY, OKLA.—The city has awarded contract to HUNTER & HUNTER, of Oklahoma City at $7,780 for constructing septic tank in connection with sewer system.

BRISTOW, OKLA.—The city has voted $18,000 of bonds for sewer construction.

GRAND JUNCTION, COLO.—The sewers to be constructed in District 3 will be of vitrified pipe, and cost $35,000. Construction work will be done by the city and not let by contract.

WENATCHEE, WASH.—Bids will be received at the office of the City Clerk until 5 p. m., May 3, for the construction of pipe sewers along various streets and alleys, aggregating approximately the following quantities: 24-in. pipe sewer, 2,056 lin. ft.; 18-in. pipe sewer, 1,554 lin. ft.; 15-in. pipe sewer, 1,773 lin. ft.; 12-in. pipe sewer, 10,225 lin. ft.; 10-in. pipe sewer, 16,366 lin. ft.; 8-in. pipe sewer, 21 456 lin. ft.; 6-in. side connection, 40,512 lin. ft.; 184 brick manholes, 4½ ft.; eight flush tanks; 74 catch basins, as provided by Ordinance No. 305, creating Local Improvement Sewer District No. 8, and according to the plans and specifications now on file at the office of Sam. R. Sumner, City Clk.

HOOD RIVER, ORE.—Bids will be received until April 18 by H. B. Langille, City Recdr., for constructing Division I. of Dist. 4 of the general sewer system.

SAN FRANCISCO, CAL.—The Board of Public Works on April 1 awarded the Yerba Buena sewer contract to the HEALY-TIBBITTS CONSTRUCTION CO., 268 Market St., San Francisco, at $211,898, which was the lowest among five submitted. The contract involves the complete reconstruction of both the sanitary and storm sewers in the district bounded by Market and Folsom Sts., Second St. and the Bay. The main sanitary sewer will be laid at an average depth of 12 ft. below the street surface, while the storm sewers will lie at a depth of 4 ft. The contract stipulates that work must be commenced within 15 days from date, and be completed within 360 days. The main sanitary sewers will be of concrete, and the storm sewers of ironstone pipe. In the section known as the "made ground district," piles will be driven as a foundation for the large sewers, the estimates calling for 190,000 lin. ft. of piling. Marsden Manson is City Engr.

SAN FRANCISCO, CAL.—Contract for constructing sewers in Lower Sunset District, bids opened on March 23, has been awarded by the Board of Public Works to the METROPOLIS CONSTRUCTION CO., INC., 24 California St., San Francisco, at $166,999.

IMPERIAL, CAL.—ARTHUR S. BENT, 346 Central Bldg., Los Angeles, Cal., has been awarded contract by the City Council, at $3,346, for the construction of a sewer system.

RIVERSIDE, CAL.—Contract for constructing sewers in Market St., bids opened on March 22, has been awarded by the city to the JOHNSON-SHEA CO., at $7,848.

OROVILLE, CAL.—The citizens on March 31 voted $12,000 of bonds for the installation of a sewer system.

HAMILTON, ONT.—Bids will be received until April 19 by John I. McLaren, Chn. Bd. of Control, for constructing sewers in Trolley, Main and several other streets.

STREETS AND ROADS.

(denotes that this work is advertised in Engineering News.)*

CONCORD, N. H.—Bids are asked until April 22 by H. C. Hill, State Engr., Concord, for constructing four miles of native stone road in Swanzey and 8,000 ft. of native stone road in Hookset, N. H.

CONCORD, N. H.—Bids are asked until 1 p. m.; April 29, by H. C. Hill, State Engr., Concord, for constructing the Bethlehem stone road, one mile.

*BOSTON, MASS.—We are officially advised that bids were received at the office of the Charles River Basin Commission, 57 Boylston St., Boston, Mass., on April 4, for resurfacing and grading the main portion of the Charles River Dam. The work will require about 5,300 cu. yds. of earth excavation; a small amount of borrowed earth; about 5,500 lin. ft. of trench in which to lay pipes which will be furnished by the Commission; 13 service boxes; two manholes; 46 catch-basins; 2,600 cu. yds. of gravel; 200 sq. yds. of vitrified brick gutters, and 14,000 cu. yds. of loam. Hiram A. Miller is Ch. Engr. The bids follow: **COLEMAN BROS.**, 15 Court Sq., Boston, $28,446 (awarded contract); F. D. Davis Co., Boston, $32,170; Luke D. Mullen, Charlestown, Mass., $33,721; W. H. Ellis, 18 Tremont St., Boston, $34,004; T. H. Gill Co., Boston, $34,955; John J. Farley, Somerville, $35,605; McCarthy & Walsh, East Boston, $37,479; William L. Miller, 19 Milk St., Boston, $42,025.

NEW HAVEN, CONN.—Bids will be received by C. W. Kelly, City Engr., until 2 p. m., April 18, for constructing a concrete sidewalk on College and Chapel Sts.

WATERBURY, CONN.—Contracts for grading road work, bids for which were opened April 5, have been awarded as follows: Columbia Boulevard, to EDWARD B. REILLEY, Waterbury, $7,072; Edward McManus submitted a bid of $11,625. Bank St., to EDWARD B. REILLEY, $1,222. Other bidders, Edward McManus, $1,688; Michael Testa, $1,925.

HARTFORD, CONN.—Bids for the construction of state road work were received at the office of the State Highway Commissioner, April 11, as follows:

Town of Woodstock, 1,300 lin. ft. gravel-telford road on the Quinnebaug Turnpike including two 24-in. tile culverts, A. Vito, Thompson, Conn., $1.75 per lin. ft. for gravel and $2.50 for telford. Also 8,500 lin. ft. gravel-telford road on the Eastford road, including two 20-in., three 24-in., two 12-in. and one 15-in. tile culverts, A. Vito, $1.65 for gravel, $2.40 for telford and $1.05 per lin. ft. for rubble drain.

Town of Tolland, 1,200 lin. ft. gravel road on Sand Hill, including one 12-in. iron culvert, O. T. Benedict, Pittsfield, Mass., $2.99 per lin. ft. for gravel, $3.59 for telford, 80 cts. for rubble drain and $6. per cu. yd. for masonry walls; Amos Bridge's Sons, Hazardville, Conn., $3.62, $4.33, $1.25 and $7.; A. C. Sternberg & Sons, West Hartford, $2.75, 75 cts., $1. and $5. Also 13,060 lin. ft. grading and hardening on the West Willington road, including two 20-in. four 24-in. three 18-in. and three 15-in. tile culverts, F. Arrigoni & Bro., Durham, $29,450 for grading, 60 cts. per lin. ft. for telford, $1.25 per lin. ft. for rubble drain; B. D. Pierce, Jr. Co., Bridgeport, Conn., $29,500, 75 cts., 75 cts.; A. Vito, Thompson, Conn., $29,103, 75 cts., $1.; O. T. Benedict, Pittsfield, Mass., $27,999, 60 cts., 80 cts.; Amos Bridge's Sons, Hazardville, Conn., $32,500, 60 cts., $1.25; A. C. Sternberg & Sons, West Hartford, Conn., $35,300, 75 cts., $1.

Town of Hampton, 9,300 lin. ft. graded road including four 24-in. tile culverts, F. Arrigoni & Bro., Durham, Conn., $16,975 for grading, 60 cts. per lin. ft. for telford, $1.25 per lin. ft. for rubble drain; Roger Kennedy, Middletown, Conn., $19,200, 70 cts., $1.10; A. Vito, Thompson, Conn., $14,350, 75 cts., $1.; O. T. Benedict, Pittsfield, Mass., $15,999, 60 cts., 80 cts.

***ALBANY, N. Y.—The bids received by the State Highway Commission on April 8 for the construction of State Highways, were:**

Ithaca-Danby Road No. 5043, Part 1, Tompkins County, 2.59 miles: MORRIS KANTROWITZ, 20½ Plain St., Albany, N. Y., $32,800 (awarded contract on Trinidad); F. V. C. Bardol, Buffalo, N. Y., $39,000; McAfee Concrete Co., Athens, Pa., $33,720; P. D. Conley, Ithaca, $35,847; Edwin D. Baker, Binghamton, $37,512.

Richfield Springs-Schuyler Lake Road No. 5037, Otsego County, 3.59 miles: DORPIAN CITY CONSTRUCTION COMPANY, Schenectady, $39,092 (awarded contract on residuum products); John Harrigan, Albany, $39,995; Charles F. Jordan Co., Albany, N. Y., $41,147; Frank V. C. Bardol, Buffalo, $46,000; Delaware Construction Co., Sydney, $41,000; E. D. Baker, Binghamton, $40,981.

Lake Road No. 492, Part 2, fourth section, Monroe County, 5.75 miles: FREDERICK A. BROTSCH, Rochester, $40,500 (awarded contract); names of other bidders were: Ripton & Murphy, Rochester; Chambers & Grady, Rochester; F. V. C. Bardol, Buffalo; Whitmore, Rauber & Vicinus, Rochester; Joseph Dunfee, Syracuse; Schroeder-Hicks Construction Co., Rochester; Frank L. Cohen, Buffalo; John Miller, Buffalo; John Pallace, Brockport; Thomas Holahan, Rochester; Hucknall Construction Co., Albion.

Batavia-Elba Road No. 853, Genesee County, 4.07 miles: JOHN MILLER, Buffalo (awarded contract); other bidders were: F. A. Brotsch, Rochester; Mosier & Summers, Buffalo, N. Y.

Geneseo Village Road No. 856, Livingston County, 1.32 miles: SCHROEDER-HICKS CONSTRUCTION CO., Rochester, $16,900 (awarded contract on residuum products); McCarty & Silverson, Mt. Morris, N. Y., $17,183; Fraser & Lowe, Geneseo, N. Y., $17,769; F. V. C. Bardol, Buffalo, $20,000.

Weedsport-Cato Road No. 686, Cayuga County, 8.72 miles: MORRIS KANTROWITZ, 20½ Plain St., Albany, N. Y., $101,900 (awarded contract on Bermudez); A. Gaffey, Syracuse, $112,900; Frederick A. Brotsch, Rochester, $109,000; Newport Construction Co., Newport, N. Y., $116,300; Burns Bros. & Haly, Watertown, $116,600; Thomas Holahan, Rochester, $113,050; Thomas O'Hearn, Yonkers, $116,100; Joseph H. Connors & Co., Fulton, $103,700; Frank L. Cohen, Buffalo, $105,900; Mosier & Summers, Buffalo, $106,000.

Canandaigna Village Road No. 5015, Ontario County, 1.19 miles: CLARENCE AIKENHEAD CO., Rochester, $22,000 (awarded contract on residuum products); Thomas Holahan, Rochester, $23,000; Hagaman, Miller & Hagaman, Rochester, $23,200; Mohawk Engineering & Construction Co., Schenectady, $23,487; Whitmore, Rauber & Vicinus, Rochester, $22,200; Schroeder-Hicks Construction Co., Rochester, $23,900; Mulderry Bros., Albany, $22,364; F. V. C. Bardol, Buffalo, $26,000; Mosier & Summers, Buffalo, $22,500; Frederick A. Brotsch, Rochester, $24,700; Robert W. Hensen, Geneva, $26,201; Michael F. Dollard, Albany, $22,905.

Carley's Mills-Parish Road No. 746, Oswego County, 1.12 miles: PARRETTI & ROBERTACCIO, Utica, $9,890 (awarded contract); J. H. Connors & Co., Fulton $11,385.

Norwich-Preston Road No. 598-a, Chenango County, .22 miles: NEWPORT CONSTRUCTION CO., Newport, $5,900 (awarded contract); E. D. Baker, Binghamton, $6,690; Parratti & Robertaccio, Utica, $7,459; Delaware Construction Co., Sydney, $7,400.

Deansboro-New Hartford Road No. 761, Oneida County, 6.32 miles: CONROY & NIXDORF, Oneida, $63,013 (awarded contract on residuum products); Newport Construction Co., Newport, $74,200; James E. Martin, Poughkeepsie, $74,900; Kennedy Roofing & Paving Co., Utica, $69,174; Ripton & Murphy, Rochester, $66,700; Daniel L. Mott, Utica, $73,600; Burns Bros. & Haley, Watertown, $70,738; Delaware Construction Co., Sidney, $64,700; Morris Kantrowitz, Albany, $63,800; Thomas Holahan, Rochester, $66,500; J. P. Cunningham, Plattsburg, $69,238.

Lowville-Martinsburg Road No. 5036, Lewis County, 2.61 miles: MORRIS KANTROWITZ, Albany, $33,000 (awarded contract on residuum products); J. P. Cunningham, Plattsburg, $33,953; Semper Bros., Watertown, $38,783; Corlear Construction Co., Schenectady, $37,865; Burns Bros. & Haley, Watertown, $35,838.

County Line-Hope Center Road No. 5038, Hamilton County, 3 miles; FLOOD & VAN WERT, Hudson Falls, N. Y., $37,974 (awarded contract on Bermudez); Schroeder-Hicks Construction Co., Rochester, $44,481; James E. Martin, Poughkeepsie, $46,200; J. H. Moynehan & Co., Herkimer, $40,595; John Harrigan, Albany, $39,919.

School House-Caroga Creek Road No. 542, Fulton County, 2.69 miles: FLOOD & VAN WERT CO., Hudson Falls, N. Y., $30,995 (awarded contract on residuum products); Alonzo Schaupp, Albany, $37,300; Schroeder-Hicks Construction Co., Rochester, $35,500; James E. Martin, Poughkeepsie, $33,469; John Harrigan, Albany, $31,949; Albert M. Banker, Gloversville, N. Y., $38,990; Spuyten Duyvil Construction Co., 271 West 125th St., New York, $34,870; Morris Kantrowitz, Albany, $32,000; C. W. Trumbull, Schenectady, $35,000.

West Berne-Gallupville Road No. 5039, Albany and Schoharie counties, 4.01 miles: DEGRAFF & HOGEBOOM, Bloomington, N. Y., $61,989 (awarded contract on residuum); Joseph Walker, New Paltz, N. Y., $67,554; John & Thomas Murphy, Cobleskill, N. Y., $62,763; John E. Consaulis, Kingston, $64,785; Creeden & Pitou, New York, $68,000; Charles F. Jordan & Co., Albany, $62,974; Ryan & Yale, Brewsters, N. Y., $64,750; Delaware Construction Co., Sidney, $69,000; Mulderry Bros., Albany, $78,400; Morris Kantrowitz, Albany, $64,000; Lane Construction Co., Meriden, Conn., $70,200.

Little Neck-Old Westbury Road No. 5051, Part 3, Nassau County, 1.97 miles: H. J. MULLEN, Jamaica, N. Y., $24,955 (awarded contract on residuum); Joseph A. Boyce, Long Island City, $24,966; Andrews Bros., Mineola, N. Y., $29,874; New Commonwealth Contracting Co., New York, $26,940; Clancy & Van Alst, Astoria, $25,995.

Falls Mills-Callicoon Road No. 823, Sullivan County, 4.82 miles: BELLEW & MERRITT CO., Tuckahoe, N. Y., $59,943 (awarded contract on residuum); Dunbar Construction Co., New York, $61,000; Creeden & Pitou, New Brighton, N. Y., $70,000; James E. Martin, Poughkeepsie, $74,500; Todd Construction Co., Newburg, $68,225; W. J. Randall, Stillwater, N. Y., $69,719; Copans & Gross, Newburgh, $73,289.50; Almahar Construction Co., Albany, $62,582; Charles F. Jordan & Co., Albany, $65,571; E. D. Baker, Binghamton, $69,800.

Sag Harbor-East Hampton Road No. 846, Suffolk County, 5.30 miles: DUNBAR CONSTRUCTION CO., New York, $62,300 (awarded contract on residuum); New Commonwealth Construction Co., New York, $77,906; H. J. Mullen, Jamaica, $65,000; Morris Kantrowitz, Albany, $62,800.

Casper Creek-Wappinger Falls, Road No. 5050, Dutchess County, 2.11 miles (on residuum): John E. Consaulus, Kingston, $27,800; Lane Construction Co., Meriden, Conn., $29,700; Ryan & Yale, Brewsters, $27,200; James E. Martin, Poughkeepsie, $24,984; Copans & Gross, Newburgh, $28,989; Samuel Beskins, Fishkill-on-Hudson, N. Y., $28,142; H. J. Mullen, Jamaica, N. Y., $30,000. (No award, bids held).

Riverside-Weavertown Road No. 5055, Part 1, Warren County, 1.63 miles: SANTONINA CONSTRUCTION CO., Albany, $25,490 (awarded contract on residuum); James E. Martin, Poughkeepsie, $30,900; Morris Kantrowitz, Albany, $25,800; J. P. Cunningham, Plattsburg, $28,578; Linehan & Burnham, Glens Falls, $27,051; S. Percy Hooker is Chn. of Comn.; Irving J. Morris is Secy., 53 Lancaster St., Albany.

ALBANY, N. Y.—Bids were received on April 4 by the Board of Contract and Supply as follows: For the improvement of Myrtle Ave., from Partridge St. to West Lawrence St., Michael F. Dollard, $39,374; John M. Holler, $38,517; Edward F. Dillon, $48,045; T. Henry Dumary, 78 State St., $31,232; Mulderry Bros., $38,773; James F. Campion, $38,591. The bidders are all of Albany, N. Y. For the improvement of Colonie St., from Broadway to Water St.: Edward F. Dillon, $15,209; Mulderry Bros., $14,746; James F. Campion, $13,358; Michael F. Dollard, $13,741. For the improvement of Colonie St., from Broadway to North Pearl St.: Michael F. Dollard, $4,112; James F. Campion, $4,298; Mulderry Bros., $4,497; John M. Holler, $4,404; Edward F. Dillon, $4,858. Walter Melius is City Engr.; Isidore Wachsman is Secy. of the Board.

*ALBANY, N. Y.—The bids received by the State Highway Commission on April 6 for the construction of public highways, were: Ithaca-Dryden Road No. 682, Part 2, Tompkins County, 3.95 miles: P. D. CONLEY, Ithaca, N. Y., $40,177 (awarded contract on residuum products basis); F. V. C. Bardol, D. S. Morgan Bldg., Buffalo, N. Y., $49,000; Morris Kantrowitz, 20½ Plain St., Albany, N. Y., $41,000; Chambers & Grady, Rochester, N. Y., $41,474; Earl P. Rhodes, Etna, N. Y., $42,548; Edwin D. Baker, Binghamton, N. Y., $42,189; John Harrigan, Albany, N. Y., $41,738; Newport Construction Co., Newport, N. Y., $41,500.

Waverly-Owego Road No. 5049, Part 1, Tioga County, 2.58 miles: E. WHALEN, Towanda, Pa., $31,307 (awarded contract on residuum products); McAfee Concrete Co., Athens, Pa., $31,821; F. V. C. Bardol, Buffalo, $37,000; John C. Bradley, Corning, N. Y., $31,717; McGreevy, McGuigan & Baum Co., Elmira, N. Y., $34,729.

Cherry Valley-Roseboom Road No. 786, 3.76 miles: DORPIAN CITY CONSTRUCTION CO., Schenectady, N. Y., $35,803 (awarded contract); Creedon & Piton, New Brighton, N. Y., $37,700; F. V. C. Bardol, Buffalo, $44,000; John Harrigan, Albany, $35,895; Floyd & Van Wert, Hudson Falls, N. Y., $36,250; Charles F. Jordan Co., Albany, $36,086; Corlear Construction Co., Schenectady, N. Y., $38,100; Delaware Construction Co., Sidney, N. Y., $36,300; Newport Construction Co., Newport, N. Y., $36,500; Albert N. Baker, Gloversville, N. Y., $39,290.

Hilton Village Road No. 851, Monroe County, 1.11 miles: CLARENCE AIKENHEAD, Rochester, $14,000 (awarded contract); Hucknall Construction Co., Albion, N. Y., $15,109; Schroeder-Hicks Construction Co., Rochester, N. Y., $14,100; Truesdale & Tompkins, Hilton, N. Y., $14,595; I. M. Ludington Sons, Rochester, N. Y., $14,100; Thomas Holohan, Rochester, N. Y., $17,292.

Shawnee-Cambria Road No. 729, Niagara County, 3.20 miles: FRANK L. COHEN, 49 Niagara St., Buffalo, N. Y., $23,300 (awarded contract); Northwestern Construction Co., Franklin, Pa., $24,418; Bellew & Merritt, Tuckahoe, N. Y., $23,990; Joseph Dunfee, Syracuse, N. Y., $24,125; Louis H. Gipp Construction Co., Buffalo, N. Y., $24,800; F. V. C. Bardol, Buffalo, N. Y., $28,000; Eugene P. Forrestel, Buffalo, N. Y., $23,333; Henry P. Burgard, Buffalo, N. Y., $29,000.

Mount Morris Village Road No. 855, Livingston County, 0.47 mile: SCHROEDER-HICKS CONSTRUCTION CO., Rochester, N. Y., $7,300 (awarded contract); McCarthy & Simerson, Mt. Morris, N. Y., $8,091; F. V. C. Bardol, Buffalo, N. Y., $8,500.

Levant-Poland Centre Road No. 5053, Chautauqua County, 2.54 miles: NORTHWESTERN CONSTRUCTION CO., Franklin, Pa., $33,596 (awarded contract on Trinidad); F. V. C. Bardol, Buffalo, N. Y., $39,000; Constantine Construction Co., Buffalo, N. Y., $36,246; Elmer M. Love & Son, Cory, Pa., $35,070.

Auburn-Seneca Falls, Part 2, Road No. 5042, Seneca-Cayuga Counties, 3.33 miles: F. A. BROTSCH, Rochester, N. Y., $55,500 (awarded contract on residuum products); P. H. Murray, Rochester, N. Y., $61,500; Schroeder-Hicks Construction Co., Rochester, N. Y., $69,000; Mosier & Summers, Buffalo, N. Y., $62,800; Thomas Holohan, Rochester, N. Y., $58,000.

Oxford-McDonough Road No. 665, Part 2, Chenango County, 5.18 miles: John H. Gordon, Albany, N. Y., $54,900; Creedon & Pitou, New Brighton, N. Y., $59,050; P. H. Murray, Rochester, N. Y., $59,450; Newport Construction Co., Newport, N. Y., $58,500; Daniel L. Mott, Utica, N. Y., $67,700; Delaware Construction Co., Sidney, N. Y., $63,500; Morris Kantrowitz, Albany, N. Y., $73,000; E. D. Baker, Binghamton, N. Y., $59,429. (Bids held.)

Canastota-South Bay Road No. [illegible]2, Madison County, 4.81 miles: P. H. MURRAY, Rochester, N. Y., $46,944 (awarded contract on residuum products); Newport Construction Co., Newport, $49,800; Central City Paving Co., Syracuse, N. Y., $4[illegible]; Frederick A. Brotsch, Rochester, N. Y., $47,9[illegible]; Mosier & Summers, Buffalo, N. Y., [illegible]0,000; Frank L. Cohen, Buffalo, N. Y., $49,000; James E. Martin, Poughkeepsie, N. Y., $51,317; Dunbar Construction Co., New York, $47,697; Chambers & Grady, Rochester, N. Y., $48,299; Daniel L. Mott, Utica, N. Y., $55,370; Conroy & Nixdorf, $48,[illegible]; Morris Kantrowitz, Albany, N. Y., $48,[illegible]; Joseph H. Conners, Fulton, N. Y., $48,9[illegible].

East Henrietta-Rochester Road No. 494, Monroe County, 4.43 miles: GR[illegible] CONSTRUCTION CO., Rochester, N. Y., $48,8[illegible] (awarded contract on residuum products); H. N. Cowles, Rochester, N. Y., [illegible]1,288; Whitmore, Rauber & Vicinus, Rochester, N. Y., $49,218; Mosier & Summers, Buffalo, N. Y., $53,000; Frederick A. Brotsch, Rochester, N. Y., $49,500; Thomas Holohan, Rochester, N. Y., $49,000; Schroeder-Hicks Construction Co., Rochester, N. Y., [illegible]0,147; Ripton & Murphy, Rochester, N. Y., [illegible]1,000; F. V. C. Bardol, Buffalo, N. Y., [illegible]8,000; Frank L. Cohen, Buffalo, N. Y., [illegible]500.

Oswego-West Fifth St.-Fruit Va[illegible] Road No. 661, Oswego County, 3.58 miles: CHAMBERS & GRADY, Rochester, N. Y., [illegible]arded contract on residuum products), [illegible]688; Mosier & Summers, Buffalo, N. Y., [illegible]; Joseph H. Conners & Co., Fulton, N. Y., $34,900; P. H. Murray, Rochester, N. Y., $34,502.

Jericho Turnpike Road No. 5,008 Suffolk County, 3.56 miles: JOSEPH A. BOYCE, 9 Jackson Ave., Long Island City, $38,590 (awarded contract on residuum products); Frank J. Gallagher, 490 Park Pl., Brooklyn, N. Y., $41,671; New Commonwealth Contracting Co., Haight and Pierce Aves., New York, $43,533; Clancy & Van Alst, Astoria, N. Y., $39,970; Dunbar Construction Co., New York, $40,000; H. J. Mullen, Jamaica, N. Y., $38,750; Morris Kantrowitz, Albany, N. Y., $49,000; Thomas O'Hearn, Yonkers, N. Y., $41,990.

Copenhagen-Lowville Road No. 841, Part 2, Lewis County, 5.74 miles: P. H. MURRAY, Rochester, N. Y., $62,558 (awarded contract on Trinidad); Morris Kantrowitz, Albany, N. Y., $73,400; Semper Bros., Watertown, N. Y., $66,821; Burns Bros. & Haley, Watertown, N. Y., $65,179; Frank L. Cohen, Buffalo, N. Y., $67,300; J. P. Cunningham, Plattsburg, N. Y., $66,555.

New Hartford Village Road No. 5052, Oneida County, 0.65 mile: E. J. DOYLE, Albany, N. Y., $18,765 (awarded contract); Harry W. Roberts Co., Utica, N. Y., $21,987; Mohawk Engineering & Construction Co., Schenectady, N. Y., $19,947; J. D. Moynihan, Mohawk, N. Y., $23,500; Conroy & Nixdorf, $24,440; F. V. C. Bardol, Buffalo, N. Y., $20,000; Charles R. Lewis, Ilion, N. Y., $20,200; Clarence Aikenhead Co., Rochester, N. Y., $19,500; Corlear Construction Co., Schenectady, N. Y., $22,700; John R. Baxter, Jr., Utica, N. Y., $19,160; James E. Martin, Poughkeepsie, N. Y., $20,514; James B. Dower, Ballston, N. Y., $19,450; Cooper Snell Co., Little Falls, N. Y., $20,798; James R. Johnston, Utica, N. Y., $19,930.20; Perratti & Robertaccio, Utica, N. Y., $19,780.

Long Lake Grove Road No. 848, Hamilton County, 3.76 miles: J. D. MOYNIHAN, Herkimer, N. Y., $44,900 (awarded contract); John Anderson, New Haven, Conn., $49,000.

Norwich-South New Berlin Road No. 596a, Chenango County, 0.34 mile: NEWPORT CONSTRUCTION CO., Newport, N. Y., $4,600 (awarded contract); Delaware Construction Co., Sidney, N. Y., $5,300; Edward J. Ellison, Maryland, N. Y., $5,488; Edwin D. Baker, Binghamton, N. Y., $5,342.

Altamont-Knox Road No. 755, Albany County, 4.25 miles: RYAN & YALE, Brewster, N. Y., $45,540 (awarded contract on residuum products); Degraaf & Hogeboom, Bloomington, N. Y., $47,500; Dorpian City Construction Co., Schenectady, N. Y., $49,831; John Harrigan, Albany, N. Y., $45,760; Morris Kantrowitz, Albany, N. Y., $52,000; Joseph Walker, New Paltz, N. Y., $48,052; Lane Construction Co., Meridan, Conn., $53,560.

Hoosick Falls Village, Road No. 5040, Rensselaer County, 1.56 miles: JOHN B. DOWER, Ballston, N. Y., $51,900 (awarded contract on Bermudez); J. E. Martin, Poughkeepsie, N. Y., $57,578; F. V. C. Bardol, Buffalo, N. Y., $55,900; Mohawk Engineering & Construction Co., Schenectady, N. Y., $53,371; W. D. Goodale, Schenectady, N. Y., $53,100; George E. Gifford, Jamaica, N. Y., $58,500; F. L. Cohen, Buffalo, N. Y., $54,600; Wiltsie & Rigney, Rensselaer, N. Y., informal; Michael Fitzgerald, Hoosick Falls, N. Y., $54,795; Mulderry Bros., Albany, N. Y., $52,940; Flood & Van Wert, Hudson Falls, N. Y., $55,100.

Syracuse-Chittenango Road No. 555, Onondaga County, 7.79 miles: E. BROWN BAKER, Herkimer, N. Y., $85,741 (awarded contract on residuum products); P. H. Murray, Rochester, $88,200; Burns Bros. & Haley, Watertown, N. Y., $94,564; Mosier & Summers, Buffalo, $89,000; Coast & Interior Contracting Co., Fayetteville, N. Y., $97,000; James Anderson, New Haven, Conn., $86,004; Central City Paving Co., Syracuse, $87,500; J. E. Martin, Poughkeepsie, $98,840; Warner Quinlan Asphalt Co., Syracuse, $91,200; Morris Kantrowitz, Albany, $92,000; Thomas O'Hearn, Yonkers, $86,790.

Rock City-Fayetteville Road No. 628, Dutchess County, 4.66 miles: HARPER, JOVAH & KEHOE, INC., Newburgh, N. Y., $44,800 (awarded contract); James E. Martin, Poughkeepsie, $47,889; John E. Consaulis, Kingston, $47,420; Joseph Walker, New Paltz, $42,781; Lane Construction Co., Meriden, Conn., $48,600.

POUGHKEEPSIE, N. Y.—The following bids were received on March 31 by the Board of Public Works for paving Main St.: Thomas H. Seaman, of Poughkeepsie, $27,799; Eldridge & Grannis, of Ossining, $20,813; James E. Martin, of Poughkeepsie, $21,370, and Trosset & Lloyd Concrete Co., of Binghamton, $18,210.

AMSTERDAM, N. Y.—We are officially advised that bids were received on April 5 by F. E. Crane, City Engr., for furnishing

material and paving 4,500 sq. yds. with fireclay brick on East Main St. and 3,600 sq. yds. on Spring St. The contract has been let to MICHAEL F. DOLLARD, of Albany, N. Y., at $2.27 per sq. yd.; total, $17,155.

SYRACUSE, N. Y.—The Board of Contract and Supply on March 28 awarded the contract for resurfacing and repairing asphalt paved streets upon which guarantee has expired to the WARNER-QUINLAN ASPHALT CO., 42 Broadway, New York, at [illegible]700.

NEW YORK, N. Y.—Bids are asked until 11 a. m., April 19, by Cyrus C. Miller, Pres. Boro. of the Bronx, for repaving with asphalt blocks and with asphalt on the relaid foundations, over street openings, [illegible] burns, etc., when and where designated, in the Borough of the Bronx during the year 1910, and setting curb where necessary; for regulating, grading, setting curbstones, flagging the sidewalks, laying crosswalks, building approaches and placing fences in Ludlow Ave., from the Southern Boulevard at Hunts Point Road, to the New York, New Haven & Hartford R. R.; for regulating, grading, setting curbstones, flagging the sidewalks, laying crosswalks, building approaches, drains, wells, etc., and placing fences in Belmont St., from Webster Ave. to Clay Ave.

Bids are asked by Alfred E. Steers, Pres. Boro. of Brooklyn, until 11 a. m., April 20, for regulating, grading and paving various streets in Brooklyn; also for furnishing and delivering 8,500 cu. yds. of paving sand, and for furnishing and delivering 8,000 cu. yds. of asphalt sand.

We are officially advised that the HASTINGS PAVEMENT CO., 25 Broad St., New York, has been awarded the contract, at $19,259, for regulating and repaving with asphalt block pavement on a concrete foundation the gutters of St. Pauls Ave., from Beach St. to Van Duzer St.; Hannah St., from St. Pauls Ave. to Van Duzer St.; Catlin Ave., from Cebes Ave. to Pommer Ave., and Tysen St., from Richmond Terrace to Fourth St., Boro. of Richmond, together with all work incidental thereto. The Barber Asphalt Paving Co., 30 Church St., New York, bid $20,642. Bids for the above work were received by George Cromwell, Pres. Boro. of Richmond, on April 5.

NEW YORK, N. Y.—Bids are asked by Alfred E. Steers, Pres. Boro. of Brooklyn, until 11 a. m., April 27, for regulating, grading, curbing and laying sidewalks on 56th St., from Sixth Ave. to Seventh Ave.; for regulating, grading, curbing and laying sidewalks, where not already done, on Ave. H, from Coney Island Ave. to the right-of-way of the Brighton Beach R. R. Co.; for fencing vacant lots on the north side of Grand St. extension, between South First and Grand Sts., and on various other streets in the Boro. of Brooklyn, with a wooden rail fence 6 ft. high.

JERSEY CITY, N. J.—We are officially advised that the Board of Street and Water Commissioners, Jersey City, has awarded contract on bids received April 4 for repaving First St., Baldwin Ave., Grove and 15th Sts., to U. S. WOOD PRESERVING CO., 165 Broadway, New York, at 86%.

*MECHANICSBURG, PA.—Bids are asked until noon, May 2, by S. E. Basehore, Secy. of Council, for paving Main St. with sheet asphalt, wood block, vitrified brick, bitulithic, amiesite, or hassam pavements. C. A. Bingham, Carlisle, Pa., is Engr.-in-charge.

BRADFORD, PA.—Bids are asked until 5 p. m., April 18, by the City of Bradford for about 4,800 sq. yds. of vitrified brick pavement, 3,400 ft. of sandstone curbing, 900 yds. of excavation, etc.; 900 ft. of 20-in. tile sewer, 400 ft. 15-in., 140 ft. 10-in., 800 yds. of excavation, etc.; all work to be done on same portion of street. E. C. Charlton is City Clerk; B. A. Wise is City Engr.

GETTYSBURG, PA.—Bids will be received by the Gettysburg National Park Comn., John P. Nicholson, Chn., until April 20 for grading and piking 8,322 ft. of roads.

OIL CITY, PA.—Bids are asked by Charles W. Mullally, City Controller, until April 18 for brick paving, about 32,000 sq. yds.; also for a concrete culvert, 4½ × 4 ft. and 2,500 ft. long.

Bids are asked until April 25 by C. W. Mullally for 15,000 cu. yds. excavation, 17,000 lin. ft. curbing, 26,000 sq. yds. of brick paving, 700 cu. yds. of retaining wall, 29,000 sq. ft. of sidewalks, 2,000 ft. of 4-ft. × 4-ft. 8-in. concrete conduit. G. F. Roess is City Engr.

WILKES-BARRE, PA.—Bids are asked until noon, April 18, by Patrick Mohan, Secy. Bd. of Supervs. of Hanover Township, 727 Hazle St., Newtown, Pa., for paving, grading, curbing, etc., in Hanover Township. F. C. Winternute, Second National Bank Bldg., Wilkes-Barre, is Township Engr.

WASHINGTON, D. C.—Bids are asked until 2 p. m., April 14, by the District Commissioners for about 6,500 cu. yds. of grading.

Bids were received as follows on April 9 by the Commissioners of the District of Columbia, Washington, D. C., for grading Pennsylvania Ave.: Warren F. Brenizer & Co., Q St., N. W., 37 cts. per cu. yd.; Holton Construction Co., 56 cts.; Harper & Voight, 74 cts.; Warren Stutler, 1318 E St., N. W., 45 cts.; J. H. Fisher, 38 cts.; Urban & Bradley, 636 F St., N. W., 68 cts.; George Hyman, South Capitol and S Sts., 49 cts. The latter bidder also offered to take earth out of 16th St. at 23½ cts. and to furnish it for 13 cts.

*NORFOLK, VA.—Bids are asked until noon, April 29, by the Board of Control for regulating and paving with some smooth material, Shirley, Spottswood and Harrington Aves., Washington Park, and parts of Maury Pl. and Stockley Gardens, and comprising some 20,000 sq. yds. W. T. Broake is City Engr.

MACON, GA.—Bids will be received until noon, April 19, by Bridges Smith, Clerk of Council, for furnishing material and paving College, Fifth and Main Sts., Georgia and Cotton Aves., requiring about 47,570 sq. yds. of pavement. C. C. Anderson is City Engr.

MONTGOMERY, ALA.—W. H. VAUGHN, of Montgomery, has secured the contract for grading, graveling, etc., about twelve miles of county roads at about $41,000. J. T. Bullen is County Engr.

ATTALLA, ALA.—Bids will be received by the Town Council, until noon, April 27, for the construction of 5,100 sq. yds. of artificial stone sidewalk, and 78,000 lin. ft. of artificial stone combined curb and gutter. Hill & Campbell, are Engrs., Gadsden, Ala.

NEW ORLEANS, LA.—The lowest bids received for improving the lake side of St. Charles Ave. are as follows: The Southern Bitulithic Co., for paving, $152,942, and the Standard Paving Co., for surface drainage, curbs, gutters, etc., in connection with paving, $73,019.

HENDERSON, KY.—The MILLER CONTRACTING CO., of Owensboro, Ky., and the MEACHAM CONTRACTING CO., of Henderson, Ky., have secured the contract for constructing granitoid sidewalks here, at a cost of $22,000.

COLUMBUS, OHIO.—Ordnances have been adopted by the City Council to proceed with the improvement of Findlay Ave., from Maynard Ave. to the Mock Road, and Mohawk St., from Frankfort St. to Reinhard Ave.; also to construct a sewer in Cherry St., from Fairwood Ave. to the N. & W. tracks.

LOGAN, OHIO.—The City Council has adopted a resolution declaring it necessary to improve North and South Mulberry St. with brick.

CINCINNATI, OHIO.—Bids are asked by the Commissioners of Hamilton County until noon, April 29, for the following county work: Specification No. 20.—For improvement of the West Road, from Harrison Pike to Shear Smith's place, in Whitewater Township. Fred Dreihs is Clerk.

STEUBENVILLE, OHIO.—Bids are asked until noon, May 9, by the Jefferson County Comrs., for grading, sewering and macadamizing the Bloomfield and Western Turnpike Road.

TERRE HAUTE, IND.—Bids are asked by the Commissioners of Vigo County until 11 a. m., April 23, for the construction of gravel roads. N. G. Wallace is County Audr.

BEDFORD, IND.—We are officially advised that no bids were received by W. G. Owens, Audr. of Lawrence County, on April 11, for the construction of 6,902 ft. of gravel road in Shawswick Township.

DANVILLE, IND.—Bids will be received by the Commissioners of Hendricks County until 10 a. m., May 2, for the construction of 1,999.5 ft. of gravel road in Center Township; 10,605.5 ft. of gravel road in Liberty Township, William H. Nichols is County Audr.

GREENCASTLE, IND.—Bids are asked by the Commissioners of Putnam County until May 2, for the construction of 9,165 ft. of gravel road in Jackson Township. D. V. Moffett is County Audr.

VINCENNES, IND.—Bids are asked by the Commissioner of Knox County until 2 p. m., May 3, for the construction of 8,140 ft. of gravel road in Vigo Township, 8,050 ft. of gravel road in Widner Township, and 9,383 ft. of gravel road in Decker Township. John T. Scott is County Audr.

JEFFERSON, IND.— Bids are asked by the commissioners of Clark, Scott and Jefferson Counties, Jeffersonville, until 11 a. m., May 23, for the construction of 26,489 ft. of crushed stone road in the three counties. Peter Nachand is County Audr.

KOKOMO, IND.—Bids are asked by the Commissioners of Howard County until 2 p. m., May 3, for the construction of the Frank Jackson and the Ephiam Miller gravel roads, each three miles in length. A. B. Easterling is County Audr.

WABASH, IND.—Bids are asked by the Commissioners of Wabash County until 10 a. m., May 3, for the construction of the Freshour macadamized road in Lagro Township, and the Driscol, macadamized roads in Lagro Township and the Treaty gravel, road in Waltz Township, J. P. Noftzgtr is County Audr.

GREENCASTLE, IND.—Bids are asked by the commissioners of Putnam County until May 5, for the construction of the M. E. Stewart gravel road in Jackson and Floyd Townships.

RUSHVILLE, IND.—ERNSTWELLER & JACKSON, of Connersville, Ind., have been awarded the contract to construct the J. W. Hute gravel road in Richland Township, at $21,779.

DETROIT, MICH.—The Common Council of Detroit, Mich., has directed the Board of Public Works, J. J. Haarer, Comr., 104 City Hall, to advertise for proposals for paving the following streets in Detroit: Meldrum Ave., from Waterloo to Mack Ave., with cedar to cost $17,160; Charles St., from Greenwood to Gilms St., with cedar, cost, $4,158; Cass Ave., from Milwaukee to North Grand Boulevard, with sheet asphalt, cost, $3,749; Calvert Ave., from Woodward to Third, with sheet asphalt, cost, $13,820; Virginia, from Third to Hamilton Boulevard, cost, $8,559; Dewey, from Forsyth to eastern terminus, with brick, cost, $2,268; Holbrook, from Brush to Oakland, with cedar, cost, $9,500; Second Ave., from Longfellow north to limits, with cedar, cost, $22,572. All to be on concrete foundations and with medina, Berea or other approved curbing.

BENTON, ILL.—It is proposed to expend about $82,000 for paving. L. L. Harper, of Belleville, Ill., is Engr.

OSHKOSH, WIS.—The contract for paving with tar macadam on West Irving St., from Main to Jackson, has been awarded to CHRIS JOHNSON, of Oshkosh, at $1.37 per sq. yd.

DULUTH, MINN.—Bids will be received about April 15 for the paving of Garfield Ave. Following are the engineers' estimates: Tar macadam, $74,500; granitoid, $86,000, or sandstone block, $86,000. T. F. McGilvraey is City Engr.

ST. PAUL, MINN.—See item under Bridges.

COFFEYVILLE, KAN.—The contract for the grading, paving and guttering of Central Ave., from First St. to Eighth St., has been let to McGUIRE & STANTON, of Leavenworth, Kan., at $15,481.

OMAHA, NEB.—We are officially advised that bids were received on March 7 by Capt. F. C. Bolles, Q. M., Omaha, for constructing brick pavements, gutters, retaining wall, etc., at Omaha Depot. The contract has been let to GEORGE J. F. COLLINS, Bee Bldg., Omaha, at $13,416, for the entire work.

SIKESTON, MO.—Bids are asked until 7 p. m., May 3, for macadamizing one mile of the Benton and Sikeston road at Sikeston, Mo. M. S. Murray, Sikeston, is Engr.

BUTLER, MO.—Bids will be received until April 19 by the City Clerk for 11,000 sq. yds. of pavement; brick on concrete foundation, 5-in. thick, sand cushion 1½ ins. thick.

ST. JOSEPH, MO.—The County Court is stated to have awarded contracts for street improvements as follows: Macadamizing 7,920 ft. of Sparta Road, at $1.20 per lin. ft., and 9,240 ft. of Water Works Road, to M. COSTELLO at $1.45 per lin. ft.

HOUSTON, TEX.—Bids are asked until noon, April 16, by John B. Ashe, Audr. of Harris County, for paving the following roads: Seabrook, 2½ miles; Webster Air Line, 18 miles; Lynchburg and Crosby road, 3 miles.

SHAWNEE, OKLA.—Frank D. Brown, C. E., Dept. of Engineering, City of Shawnee, advises us that arrangements have been started for about 20 miles of paving.

*CLINTON, OKLA.—The city will receive bids until 8 p. m., May 3, for the construction of approximately 67,000 sq. yds. of asphalt paving with 5-in. concrete base, together with the necessary grading, storm sewers and so forth; also 20,000 lin. ft. of concrete curb and gutter combined, 5,000 lin. ft. of concrete curb and 5,000 lin. ft. of concrete gutter. J. L. O'Hearn is City Engr.

ENID, OKLA.—Bids are asked until noon, April 18, by E. R. Lee, City Clerk, for the improvement of certain streets, avenues and parts thereof in the city of Enid, by grading, paving, curbing, guttering and draining. C. H. Sexton is City Engr.

*WENATCHEE, WASH.—Bids are asked by Sam. R. Sumner, City Clerk, until 5 p. m., May 3, for the improvement of Mission St. from the southerly line of First St., North, to the northerly line of Stevens St. (approximately 6,400 ft.), by grading, concrete sidewalks, concrete curbing, wood gutters and crosswalking, paving four blocks from First St., North, to Kittitas St., with brick, creosoted wood block, asphalt or other suitable material and surfacing the remainder of the street from Kittitas St. to Stevens St. with macadam or other suitable covering.

SEATTLE, WASH.—The contract for the construction of the Alexander Road, a 4-mile section between Issaquah and Redmond, has been let by the Board of County Commissioners to E. R. CLARK. Cost, $15,800.

PORTLAND, ORE.—The Barber Asphalt Paving Co. has submitted the lowest bid at $1.44 per sq. yd., or a total of $20,105, for paving with asphalt a portion of Columbia St.

LOS ANGELES, CAL.—The following bids have been received by the Board of Supervisors for grading and paving Eagle Rock Road: Peter Walker, Pacific Electric Bldg., $16,466; T. D. Donegan, $18,200, and Robert P. Law, $23,500.

POMONA, CAL.—The following bids have been received for grading and paving 15½ miles of El Monte Road between Bassett and Pomona: ARTHUR S. BURT & CO. and GEORGE F. PENNYBAKER, of Los Angeles (awarded contract), at $95,215; Barber Asphalt Paving Co., of Los Angeles, $107,860; C. W. Brashear, $142,837.

LONG BEACH, CAL.—Bids will be received about May 30 by the Board of Public Works for paving Railway, American and Appleton Sts.

PRESCOTT, ARIZ.—Bids will be received until April 25 by Robert A. Craig, Secy. Bd. Control, at Phoenix, for constructing 13 miles of territorial highway between the towns of Prescott and Phoenix.

SALT LAKE CITY, UTAH.—We are officially advised that bids were received on April 1 by the Board of Public Works for paving Third South St. and Rio Grande St., in Paving Extension No. 42. H. G. McMillan is Chn. The only bid received was submitted by P. J. Moran at $23,495, for California asphalt. Time, 90 days. G. F. McGonagle is City Engr.

TORONTO, ONT.—Bids are asked by G. R. Geary, Mayor and Chn. of the Board of Control, until noon, April 19, for paving various streets with asphalt, bitulithic, vitrified block, asphalt block and for grading and curbing.

YORKTON, SASK.—Bids are asked by the Secretary-Treasurer of the Town of Yorkton until April 25 for furnishing all material and for the construction of approximately 80,000 sq. ft. of concrete sidewalk. F. T. McArthur is Town Engr.

MANUFACTURING PLANTS.

(* *denotes that this work is advertised in Engineering News.*)

WOODSVILLE, N. H.—We are officially advised that the H. P. CUMMINGS CONSTRUCTION CO., of Ware, Mass., and 95 Milk St., Boston, has secured a contract from the Boston & Maine R. R. Co. for the construction of a group of buildings to be located at Woodsville. They are to consist of repair shops, engine house and a boiler house.

HYDE PARK, MASS.—Carl Stohn, of Clarendon Hills, has purchased property at Hyde Park, Mass., on which he will erect a plant for the manufacture of textile fabrics. The new plant will cost about $40,000.

SPRINGFIELD, MASS.—The Aldermen have voted to sell a lot of Front St., near the almshouse, for manufacfuring purposes. Frank Kendall, of the Gaylord-Kendall & Co., intends to take over the land at once. It is the intention of Mr. Kendall and Mr. Gaylord to erect a factory having 1,500 sq. ft. of space on each floor, and three or four stories high. The building will be rented to a firm of manufacturers. It is possible that power will be furnished from the electric lighting station, which is near by, and which has been equipped since fall with new apparatus, which will enable the department to supply power to factories. The lot which is to be sold is about 400 ft. long, and varies in width from 80 to 125 ft. It is by the tracks of the Boston & Maine R. R.

LOWELL, MASS.—The Building Department has received an application from the Lowell branch of the Bigelow Carpet Co. for permission to build a combination turbine house, power station and picker house, the structure to be four stories high, with location in the carpet yard. The dimensions are 93 × 70 ft., and brick is the material to be used. The power station and turbine house will take up two stories, and the picker house the other two stories. The cost is estimated at $50,000.

WOONSOCKET, R. I.—A mill to cost $350,000 is to be built during the present year as an addition to the plant of the Lawton Spinning Co., of this city. The addition will increase the capacity of the plant to 100,000 spindles.

WATERBURY, CONN.—The Baird Machine Co., of Oakville, contemplates making additions to its plants. The City of Waterbury has taken favorable action on the proposition to sell the company about ten acres of land for this purpose.

HARTFORD, CONN.—The Whitney Mfg. Co. is preparing to erect an addition to its present plant, and bids will be asked soon.

BUFFALO, N. Y.— The Webster Citizens Ice Co. is receiving bids for a branch plant for the manufacture of ice at Essex St. and Richmond Ave. The plant will be 110 × 157 ft., one story and basement, and will be built from plans of William Bettendorf, 191 Glenwood Ave.

The Buffalo Union Furnace Co. has let general contract to WILLIAM BETTENDORF, 191 Glenwood Ave., for a 1-story and basement testing laboratory, 30 × 83 ft., at its plant, Hamburg St. and the Erie R. R. Also for a 2-story and basement office building, 40 × 40 ft., at 51 Hamburg St.

YONKERS, N. Y.—A brick mill is to be erected by Alexander Smith & Sons' Carpet Co., Yonkers. Work on the new structure will be started at once.

NEW YORK, N. Y.—Plans have been filed for a 6-story factory to be built on a plot owned by the J. J. Astor Estate at 610 and 612 West 51st St., for Kohler & Campbell, as lessees, at a cost of $25,000. Ross & McNeil are Archs., 39 East 42d St.

The Ford Motor Co., 1723 Broadway, New York, has bought a tract of land extending 200 ft. along Jackson Ave., Long Island City, near the Hunneywell viaduct, as a site for a plant which is to cost $100,000.

JERSEY CITY, N. J.—The Hudson & Manhattan R. R. Co., 30 Church St., New York, contemplates erecting five 2-story shops on Warren St. and Railroad Ave., it is stated, as follows: 34.6 × 250-ft. paint shop; 34 × 220-ft. repair shop; 28 × 397-ft. inspectors' shop; 34.6 × 175-ft. truck and blacksmith shop, and a 28.9 × 76.3-ft. office and heater room. Cost, $150,000. Charles M. Jacobs is Ch. Engr.

BAYONNE, N. J.—Plans and specifications have been drawn for the erection of a $75,000 plant by the Nucoa Butter Co., 133 Front St., New York, on the site of the old New Jersey Athletic Club grounds, on Ave. A, Bayonne, N. J. It will be completed in six months, and will employ 300 men.

GREENVILLE, PA.—At Greenville the Bessemer & Lake Erie R. R. proposes to erect several buildings for shops, and the installation of additional machinery which will represent an expenditure of about $250,000 to $300,000. The structures will include an office building for E. B. Gilbert, Supt. of Motive Power, and his staff, a 17-stall round-house; forge building, 700 ft. long; fireproof pattern plant shop; an addition to the new power plant and a coaling station. Two 500-HP. engines will be installed.

ERIE, PA.—The General Electric Co., Schenectady, has made public plans for a plant at Erie, Pa., to give employment to 20,000 men. The work of enlarging the Schenectady plant is under way and soon the number of employes here will be 20,000. About 800 acres of ground have been secured at Erie and the initial floor space will be 150 acres. Twenty large buildings and 38 smaller ones will be erected. A gray-iron foundry, pattern shops and warehouses will be put up first. George E. Williams, Schenectady, is Gen. Mgr.

PHILADELPHIA, PA.—The Mayer & Englund Co., 1020 Filbert St., has bought a tract, 135 × 187 ft., on the east side of 17th St., facing Cambria St., from Edward T. Flood, for a consideration not disclosed, as a site for a manufacturing plant, to be erected this spring. The purchasers have commissioned Stearns & Castor, Archs., Stephen Girard Bldg., to design the buildings, and they have sketches in preparation for a building covering about half the lot. The dimensions and height have not been determined upon definitely. The owners are considering this question with the architects at the present time. The building may be either 60 or 80 ft. by 125 ft., and either four or eight stores high.

READING, PA.—Lambert A. Rehr has taken out a permit for an abatoir to be built for the Reading Abattoir Co., between Second and Third Sts. The main building will be brick, three stories high, 120 × 112 ft., with cement roof; the rear building, brick, three stories, 40 × 40 ft.; second rear building, brick, 1-story, 40 × 50 ft.; annex, brick, 1-story, 40 × 55 ft. Estimated cost, $80,000.

SCRANTON, PA.—Plans have been prepared by Owen McGlynn, Simon Long Bldg., Wilkes-Barre, for rebuilding and enlarging the Maloney Oil Co.'s plant, on Meridian St., which was damaged by fire several months ago. The improvement will cost about $12,000. The former brick structure, 50 × 150 ft., is to be rebuilt, and a 2-story brick addition, 40 × 50 ft., will be attached to it. The front part of the building, which is to be used for offices, will be fireproof.

SPARTANBURG, PA.—It has been arranged to organize a company with a capital stock of $400,000 to build a cotton factory at Chesnee, S. C. This is a new town on the Carolina, Clinchfield & Ohio Ry. It is 18 miles north of Spartanburg, S. C., and W. E. Burnett, Pres. of the First National Bank of Spartanburg, is to be Pres. of the proposed company. Others interested are to be John B. Cleveland, J. N. Cudd and R. K. Carson, of Spartanburg.

BALTIMORE, MD.—The Colonial Trust Co., Saratoga and Charles St., has sold, through G. Howard White & Son, a lot fronting on Wicomico and Scott St., to the Paper Mills Co., Lombard and Frederick Sts., for about $14,000. The lot is 130 × 400 ft. It will be improved with a factory which will cost about $25,000.

WINSTON-SALEM, N. C.—The Shamrock Hosiery Mills, of Winston-Salem, N. C., has awarded contract to FOGLE BROS., of Winston-Salem, for the erection of the proposed addition. This building will be of brick, 100 × 200 ft., two stories high, with sawtooth roof, automatic sprinkler system, vacuum cleaning equipment, etc. The company has 150 knitting machines in its present mill. Noted on March 24.

The P. H. Hanes Knitting Co., of Winston-Salem, N. C., has decided on plans and specifications for the erection of its 10,000 spindle yarn mill. In effecting this addition to its facilities the company will increase its capital stock to the extent of $250,000. The mill building will probably be 500 ft. long, 25 ft. wide and will have a monitor roof. The company has a large knitting mill for the production of men's fine ribbed underwear.

ROCKHILL, S. C.—The Manchester Cotton Mills Co., of Rockhill, S. C., has decided to increase its weaving capacity and will begin the erection of a building at once, in which to install the necessary looms. The number of looms will be 100. The company is at present operating an equipment of 18,200 ring spindles, 300 looms, etc., driven by electric and steam power, on the production of ticking and yarns. The company is capitalized at $250,000 and it will probably expend $30,000 for the enlargement.

ENSLEY, ALA.—Preparation is being made by the American Steel & Wire Co., to erect a new plant at Ensley, Ala., near Birmingham, which will have a capacity of turning out wire nails, barbed wire, copper wire and other products of a wire mill. Charles W. Lutz, Gen. Mgr., of the plant at Donora, will assume charge of the work. The plant will cover ten or thirteen acres of ground, and will cost approximately $4,000,000. Mr. Lutz will be succeeded at the Donora plant by Frank D. Haynes.

VICKSBURG, MISS.—The Vicksburg Traction Co., will soon place contracts for constructing a car house in Vicksburg. W. B. Moorman, Vicksburg is Gen. Mgr.

KINGSPORT, TENN.—The Clinchfield Portland Cement Co., is letting contracts for a cement plant to be built here. The factory will have a capacity of 1,000 bbls. a day.

MEMPHIS, TENN.—Plans are under way for the establishment here of a stave-manufacturing plant by J. J. Russell, of Minneapolis, Minn. It is estimated that the industry will represent an outlay of $50,000.

TOLEDO, OHIO.—The National Pole Co., with a capital of $1,000,000, will erect a plant here. The company deals in cedar ties, posts and piling. It has obtained a ten years' lease on the Barbour & Starr property on North Summit St. Ten acres of that ground will be utilized. The office, stables and dock frontage, containing three slips will be used. J. C. Kirkpatrick, is Pres. and Gen. Mgr., Seattle; J. E. Zeluff is to be Resident Mgr.

COLUMBUS, OHIO.—The Board of Directors of the Buckeye Steel Castings Co. has authorized the construction of a large addition to the shipping department, 175 × 300 ft. It is the first of a number of structures which will be authorized this year.

HUNTERBURG, IND.—The Potako Brick & Tile Co., recently incorpporated with a capital of $25,000, will ask for bids soon for the erection and equipment of a manufacturing plant. Charles Woenkhause, Pres.

GARY, IND.—The American Sheet & Tin Plate Co. has awarded the contract to the RAYMOND CONCRETE PILE CO., 90 West St., New York, the contract for the construction of the sub-structure of the plant that it is to erect at Gary, Ind. This plant will cover 56 acres. It will be the American Sheet & Tin Plate Company's first plant at Gary. The contract includes approximately 3,500 concrete piles and 30,000 cu. yds. of concrete. The cost of the entire plant will range from $4,000,000 to $5,000,000. G. C. Kimball, of Pittsburg, Pa., Ch. Engr., John M. Davidson, Resident Engr.

DETROIT, MICH.—Albert Kahn & E. Wibly, Archs., Trussed Concrete Bldg., Detroit, have let the masonry contract for the San Telmo Cigar Co., O. Rosenberger, Gen. Mgr., 540 Forrest Ave. E., for its 4-story and basement plant, 95 × 100 ft., to PUTMAN & MOORE, Penobscot Bldg.

The same architects have let for the masonry contract the Grabowski Power Wagon Co., Max H. Brabowski, Genl. Mgr., 68-72 Champlain St., for its 4-story factory building, 200 × 62 ft., OTTO T. MISCH, Penobscot Bldg.

The Sulllivan Packing Co., 252 Beecher St., Detroit, is contemplating a brick addition to its present packing plant.

DETROIT, MICH.—The Northway Motor & Mfg. Co., announces that it will build a $100,000 addition to its present factory building at Maybury and Handcock Aves., A. F. Knoblock is Gen. Mgr. There will be a 3-story building, 225 × 90 ft., with two wings, 175 × 60, ft. and one 1-story building in the court, 150 × 75 ft.

Belknap & Swartz, 15 Gillman St., Detroit, have let the general contract for their proposed machine shop, 99 × 60 ft., to G. W. GOLDEN, Tower Court, Detroit.

Smith, Hinchman & Grylls, Archs., 710 Washington Arcade Bldg., Detroit, have let the following contracts for the Bagley Land Co., John N. Bagley, Chn.., 48 Bates St., for the 6-story and basement factory, 304 × 80 ft., and 240 × 75 ft., power bldg., 100 × 38 ft., 1-story to JAMES W. PARTLAN, 53 Park Pl., Detroit, Mich.

The same architects have let the following contracts for the proposed car house and office building for the Detroit United Railway, Frank W. Brooks, Gen. Mgr., 12 Woodward Ave.: General contract to A. A. ALBRECHT, 1212 Penobscot Bldg.; structural iron to RUSSEL WHEEL & FOUNDRY CO. Joseph Campeau & M. C. R. R.; carpentry to TOWN & SCHREIBER, 127 Grandy Ave.; plumbing to O. A. Wurm, 50 Adams Ave. West.

The same architects have prepared plans and specifications for an addition to the Crawford Laundry, C. B. Davis, Mgr., 395 Jefferson Ave. Stock brick, bedford cut stone, composition roofing and electric fixtures will be used in construction.

The Universal Button Fastening & Button Co., 682 Fort St., Detroit is contemplating a new brick addition to the present plant.

Malcomson & Higginbothom, Archs., 404 Moffat Bldg., have let the following contracts for the Regal Motor Car Co., on their new brick factory between Harper and St. Antoine Sts., Detroit, to be 582 × 168 ft.: carpentry to JOHN WHITTAKER, 51 Church St.; masonry to F. H. GODDARD, 910 Ford Bldg.; structural iron work to RUSSEL WHEEL & FOUNDRY CO., Joseph Campeau and M. C. R. R.; plumbing to HARRIGAN & REID, 70 State St.

Nettleton & Weaver, Archs., Penobscot Bldg., Detroit, have let the structural iron work on the following buildings for the Timken Detroit Axle Co., to the RUSSEL WHEEL & FOUNDRY CO., Joseph Campeau & M. C. R. R., for a plant located at Clark Ave. and Wabash R. R.; 1-story factory building, 45 × 200 ft., 4-story factory building, 62 × 70 ft., and a 1-story addition to present 3-story building, 63 × 158 ft.

ST. CLAIR HEIGHTS, MICH.—The Lozier Mfg. Co., H. A. Lozier, Mgr., Ford Bldg., Detroit, is having plans and specifications prepared for a 4-story factory building, 760 × 60 ft., and two wings, 260 × 60 ft., to be located in St. Clair Heights.

NORTH CHICAGO, ILL.—Bids were received as follows on April 6, at the office of the Chief of Bureau of Navigation, Navy Dept., Washington, D. C., for the construction of a refrigerating plant at the Naval Training Station, North Chicago, Ill. Westerlin & Campbell Co., 53 South Clinton St., Chicago, $13,489; Velter Mfg. Co., Milwaukee, Wis., $12,750; Frick Co., Waynesboro, Pa., $14,000; Kroeschell Bros., Ice Machine Co., 29 Erie St., Chicago, $14,630; Creamery Package Mfg. Co., 184 Kinzie St., Chicago, $13,561. The last three bidders bid on their own specifications not on Government specifications.

SPRINGBROOK, WIS.—The Willard-Harlow Co. has plans for the erection of a 2-story brick building, 30 × 30 ft., of mill construction, for the manufacture of tents, awnings, etc.

BRAINERD, MINN.—The Northern Pacific Ry. Co., W. L. Darling, Ch. Engr., St. Paul, Minn., has awarded the contract for the construction of a group of buildings at the railroad shops here to the W. J. HOY CONSTRUCTION CO., Metropolitan Opera House Bldg., St. Paul, Minn. Total cost, $400,000. A. H. Hogeland, is Ch. Engr., St. Paul.

ST. PAUL, MINN.—The contract for the 2-story pressed brick and cut stone coach shop for the Great Northern Ry. Co., to be built at the Jackson St. yards has been awarded to LIBBY & NELSON, 460 Temple Court, Minneapolis, Minn. The same contractors have been awarded the contract for the proposed 1-story repair shop at the same location. Cost, $40,000. A. H. Hogeland, City, is Ch. Engr.

GIBBONS, MINN.—Bids are asked by F. V. Burdorf, Secy., until May 2 for the erection of a 1-story creamery building, 32 × 70 ft., of cement blocks, for the Gibbon Creamery Co.

MINNEAPOLIS, MINN.—The Carr Collier Co. will erect in the fall a 5-story factory and warehouse building on its property at Ramsey St. and Tenth Ave., N. E. It will have a brick exterior, mill construction interior, steam heat, plumbing, electric wiring, gas. The office will be plastered and will have hardwood interior finish and floors. It is not decided what the size of the building will be. It will cost, $100,000.

AINSWORTH, NEB.—J. N. Newell will erect a bakery and candy factory at Main and First Sts. It will be of cement construction.

WAHPETON, N. DAK.—The Inter-State Product & Cold Storage Co., M. E. Benedict, Secy., will erect a cold storage plant and creamery, to cost $20,000.

EL PASO, TEXAS.—The El Paso Electric Ry. Co., which is owned by the Stone-Webster interests, of Boston, Mass., will erect car barns here, it is stated. C. W. Kellogg, El Paso, is Local Mgr..

GALVESTON, TEXAS.—The Galveston Waste Mill, of Galveston, has increased its capital stock from $10,000 to $20,000, for the purpose of providing additional capital which will be largely expended for new machinery and other improvements to increase the plant's output. This company has a mill for cleaning and otherwise handling and manufacturing cotton waste.

FORT WORTH, TEX.—The Northern Texas Traction Co., has adopted plans for car shops which it will construct here. It is announced that it will build its own cars and do all repairing. The new building will be built of brick and concrete materials. H. T. Edgar, Ft. Worth, is Vice-Pres. and Mgr.

MUSKOGEE, OKLA.—W. D. McNeill, of Fayetteville, N. C.; John Siglar, of South Carolina, and associates are planning the erection of a cotton factory at Muskogee, Okla. They have accepted an offer of 30 acres of land and a cash bonus of $50,000 to locate the plant in this city. Their plans contemplate an equipment of 10,000 spindles and 300 looms for manufacturing sheetings, the investment to be $300,000. Details will be determined later.

LOS ANGELES, CAL.—The Los Angeles & Mount Washington Ry. Co., will soon let contracts for building a repair shop in Los Angeles. John A. Rivers is Supt.

SAMOA, CAL.—The Dolbeer-Carson Lumber Co. will start to work soon on the construction of a round house and machine shop near the company's shingle mill, north of Samoa, on the bay shore. The Carson logging train will be in operation soon, and the roundhouse and machine shops will be for the accommodation of the locomotive and cars.

MISCELLANEOUS CONTRACTS.

(** denotes that this work is advertised in Engineering News.*)

U. S. RECLAMATION SERVICE.—All news relative to canal projects, etc., will be found under Water Supply—Irrigation.

FENCES.—New York, N. Y.—See item under Streets and Roads.

*POWER BOAT.—Wilmington,' Del.—Bids will be received by Maj. R. R. Raymond, Corps of Engrs., U. S. A., until 11.30 a. m., May 11, for furnishing and delivering a power boat.

WIRE AND CABLE.—Washington, D. C.—Bids will be received until April 15 by Capt. C. De F. Chandler, Signal Corps, U. S. A., Washington, for furnishing 420 ft. high-tension wire and 8,000 ft. cable, type 327.

SEAWALL.—Fort Adams, R. I.—Bids will be received by Lieut. Frank H. Phipps, Jr., Constr. Q. M., U. S. A., Fort Adams, until 10 a. m., April 27, for construction of a seawall and removal of face cover at Fort Adams.

AIR COMPRESSOR.—New York, N. Y.—Bids will be received by the Department of Bridges until 2 p. m., April 21, for furnishing and erecting one duplex two-stage air compressor at the Brooklyn Bridge, Boro. of Brooklyn.

DREDGING.—Toronto, Ont.—Bids were received on March 30 by C. W. Postlethwaite, Harbor Master, for dredging required in the harbor of Toronto for this season. Contract was awarded to JOHN E. RUSSELL, Toronto.

STONE.—Washington, D. C.—Bids will be received until 2 p. m., April 15, by the District Commissioners for quarrying and crushing stone at District of Columbia quarry at Dickerson, Md., or for furnishing crushed stone from bidder's quarry.

SEATS.—New York, N. Y.—Bids are asked by the Park Board until 3 p. m., April 28, for furnishing all the labor and materials necessarw to manufacture and set up 200 stationary seats on Ocean and Eastern Parkways in the Boro. of Brooklyn.

RAILWAY SUPPLIES.—Fort Leavenworth, Kan.—Bids will be received by Capt. W. D. Davis, Q. M., U. S. A., until May 2 for furnishing and delivering f. o. b. cars Fort Leavenworth, railway supplies, consisting of rails, angle bars, ties, etc., and a track scale.

*DREDGING.—Boston, Mass.—Bids will be received until 2 p. m., April 22, by the Board of Harbor and Land Commissioners, State House, for dredging in the upper portion of the channel of Weymouth Fore River. Estimated quantity, 27,000 cu. yds., scow measurement.

LEVEE.—Cincinnati, Ohio.—Bids will be received until noon, April 29, by the Commissioners of Hamilton County, under specification No. 25, for improvement of Newton levee, from south end of bridge to north end of cement sidewalk, a distance of about 1,500 ft., Anderson Township.

CANAL.—Cokeville, Wyo.—Bids will be received by S. M. Covey, 933 East First South St., Salt Lake City, Utah, until April 20, for the construction of the Covey canal, near Cokeville, Wyo. Approximate quantities: Excavation of earth, 100,000 cu. yds. loose and solid rock, 2,000 cu. yds.

GRADE CROSSING.—Columbus, Ohio.—W. H. Luchtenberg of Columbus, Ohio, was the lowest bidder for excavation, grading and draining for the elimination of the crossing of the Hocking Valley R. R. at State St., Broad St., Town St., and Rich St. His bid for the combined work was $65,000.

DRAINAGE DITCHES.—St. Paul, Minn.—The State Drainage Board will receive bids until noon, April 15, for the construction of two drainage ditches. No. 93, in Aitkin County, comprising 45,000 cu. yds.; and No. 89, in St. Louis County, comprising 65,000 cu. yds., S. G. Iverson, is Secy. of the Board.

DRAINAGE DITCH.—Logan, Iowa.—Contract has been awarded to the CANAL CONSTRUCTION CO., 188 Madison St., Chicago, for construction of the Upper Boyer ditch in Harrison County. Estimated quantity, 1,271,860 cu. yds. of excavation, at 6.76 cts. per cu. yd. Seth Dean, Glenwood, Iowa, Engr. Estimated cost, $130,000.

VACUUM CLEANER.—Cleveland, Ohio.—Bids were received on March 23 by the County Building Commission for installing a vacuum cleaning plant in the Cuyahoga County court-house. French & Hubbard, Engrs., Albany Bldg., Boston, Mass. Contract was awarded to the CONNERSVILLE BLOWER CO., Connersville, Ind., $3,160.

DRAINAGE.—Miller, Ind.—Bids were received on April 1 by M. J. Zell[illegible], Town Clk., for the construction of a drainage system consisting of 15,000 cu. yds. open ditch excavation work, and 2,1[illegible] ft. of 36-in. reinforced-concrete pipe. [illegible] R. [illegible]on & Cutler, Engrs., Gary, Ind. Contract was awarded to GUST STROM, Miller, $11,849.

*DREDGING.—Ashtabula, Ohio.—Bids will be received by the Director of Public Service until noon, April 27, for improving Ashtabula Creek at Ashtabula, Ohio. The work includes, approximately, 360,327 cu. yds. of earth excavation; 136,487 cu. yds. of rock excavation; 2,160 lin. ft. of "I" beam bulkhead. A. J. Richardson, Clerk.

BARGE CANAL.—Albany, N. Y.—F. C. Stevens, Supt., of Public Works, has awarded Barge Canal Contract No. 7[illegible] Oswego Canal to CUNNINGHAM & WOOD[illegible], Hudson Falls, N. Y., $47,721. Engineer's estimate, $55.154. The work embraces [illegible] the contract includes the construction of [illegible] dike along the Oswego River for about [illegible] miles in the vicinity of Fulton.

DRAINAGE DITCH.—Warrensburg, Mo.—The Commissioners of the Blackwater Drainage District No. 1, of Johnson County, Mo., have awarded contract to R. [illegible] McWILLIAMS and G. A. McWILLIAMS, 702 Royal Insurance Bldg., Chicago, for the construction of drainage ditch. Total excavation, 1,250,0000 cu. yds.; approximate cost, $126,000, time of completion, 18 months.

DOCK.—Lorain, Ohio.—The Baltimore & Ohio R. R. Co. has made public its plans for dock improvements here when announcement was made that the general contract for work, to cost $1,000,000, had been let to P. FARRELL, Second National Bank Bldg., Cincinnati. The improvements include an unloading slip 500 ft. in length, two Brown unloading plants, 1,100 ft. of solid concrete docks, and a power plant, 75 × 125 ft.

DOCK WORK.—Mobile, Ala.—JETT BROS., Mobile, have been awarded the contract for rebuilding and repairing the city dock property, as provided for by the recent action of the City Council. The contract price for the work to be done is $4,951. The improvement includes new bulkheads and wharves for a distance of 98 ft. from St. Anthony St. to the city slip, and minor repair work on 100 ft. of wharf at mouth of the slip.

IRON FENCE.—Boston, Mass.—Bids were received by the Charles River Basin Commission, 367 Boylston St., Boston, on April 11, for furnishing and erecting an iron fence along the Basin wall of the Charles River Dam. About 1,600 lin. ft. of fence will be required. Hiram A. Miller, Ch. Engr. Contract was awarded to the VULCAN RAIL & CONSTRUCTION CO., 175 North Ninth St., Brooklyn, N. Y., at $3,564.

OIL.—Boston, Mass.—The Standard Oil Co. was underbid for the contract to furnish 400,000 gallons of oil to be used on Boston streets, but it has received the contract on the ground that its product was odorless, while that of the lowest bidder was objectionable on account of its odor. Half the oil to be supplied will be emulsion, and will cost the city 3.9 cts. a gal., while the rest will be emulsified and will cost 4.95 cts. a gal.

*DIVERSION CHANNEL.—East St. Louis, Ill.—Bids will be received until noon, May 16, by the Board of Trustees, East Side Levee and Sanitary Dist., Sexton Bldg., for construction of a diversion channel for Cahokia Creek and necessary levees and embankments and other auxiliary or incidental improvements, in accordance with Ordinance No. 5 of The East Side Levee and Sanitary District. Details are given in advertisement in this issue.

FERRY BOAT.—San Francisco, Cal.—Bids were received as follows by the United States Commissioner of Immigration for building a ferry boat 142 ft. long and with a passenger capacity of 250 for carrying passengers between the mainland and the immigration station on Angel Island: United Engineering Works, $104,000, to be completed in 260 days; Union Iron Works, $117,950 days, to be completed in 250 days; Risdon Iron Works, $139,700, to be completed in 240 days.

PNEUMATIC TUBES.—New York, N. Y.—The New York Pneumatic Service Co., 52 Broadway is ready to receive bids for the laying of a line of 8-in. pneumatic tubes between the U. S. Custom House and U. S. Appraisers' Warehouse, New York City, including trenching, laying, paving, and construction of manholes. Bids will be received until 5 p. m., April 20. To have their bids considered, contractors must have had experience in laying either gas or water pipes or pneumatic tubes in New York City. Plans and specifications can be obtained upon application at the office of the company.

BARGE CANAL.—Albany, N. Y.—F. C. Stevens, Supt. Public Works, has awarded Barge Canal Contract No. 21, for excavating the canal prism and constructing guard dock, highway bridge abutments and all appertaining work between the Genesee River and the east end of Contract No. 6, a distance of 2.43 miles, to LANE BROS. CO., of Altavista, Va., for $1,323,150; and Barge Canal Contract No. 39, for dredging a channel in the Oswego River and performing work incidental thereto, between Three Rivers and Fulton, a distance of 10.48 miles, to JAMES STEWART & CO., 30 Church St., New York, for $1,048,674.

*BARGE CANAL.—Albany, N. Y.—Bids were received by F. C. Stevens, on April 7, for Barge Canal Contract No. 90, which provides for furnishing and installing equipment for operating and lighting Lock No. 24 on the Erie Canal at Baldwinsville, Locks Nos. 1, 2, 7 and 8 on the Oswego Canal at Phoenix, Fulton and Oswego, and Locks Nos. 9, 11 and 12 on the Champlain Canal at Smith's Basin, Comstock and Whitehall. Two bids were received: the North Eastern Construction Co., **225 Fifth Ave., New York, $179,[illegible] and the D'OLIER ENGINEERING CO., [illegible] South Eleventh St., Philadelphia, Pa., which was awarded the contract at $178,197. The Engineer's estimate of the cost of the work is $180,630. A proposal was also submitted by the Lord Construction Co., of New York, which was declared informal. Itemized bids are given under Contract Prices on page 154.**

*DREDGING EQUIPMENT.—Philadelphia, Pa.—Bids were received by Jos. F. Hasskarl, Acting Dir., Dept. Wharves, Docks and Ferries, as follows, on March 28, for one hydraulic dredge, one combination dredge, one tug boat not less than 80 ft. over all, one tug boat not less than 60 ft. over all, one or three bottom dump scows of about 500 yds. capacity, and one or three bottom dump scows of about 300 yds. capacity. Charles R. [illegible]n, 119 Walnut St., Philadelphia, offered the tugboat Elizabeth B. for $6,950. This boat was formerly the John B. Patton, and was built at Tuckerton in 1896.

Peter Hagan & Co., 218 Walnut St., Philadelphia, offered to supply two tugboats. For the Peter Hagan, built in 1873, $8,000 was asked. For the Transit, built in 1884, the sum named was $14,000. The former boat is [illegible] ft. long and the latter 91 ft.

A. J. Loeper, 1931 South Second St., Philadelphia, offered to dispose of the tug Columbia for $9,000. This boat was built in 1872. It was formerly owned by the Pennsylvania R. R. and used in New York Harbor towing car floats.

Francis O'Brien, representing Philadelphia interests, offered a hydraulic 20-in. dredge for $45,000.

The Ellicott Machine Co., of Baltimore, offered a new hydraulic 18-in. pipe line dredge for $88,500. This dredge is still at the shipyard, and is said to be capable of discharging material not less than 5,000 ft. from the dredge.

J. Sanford Ross, Inc., of Jersey City, offered to supply scows for prices ranging from $3,300 to $4,150. Two tugboats were also offered at $10,500 to $12,700.

John Damers & Co., yacht and ship builders, of New York, offered the combination dredge Sampson for $66,500, with $2,000 additional should the boat be delivered here. Other dredges were offered for $23,000 and $24,000. This firm asked $80,000 and $64,000 for two hydraulic dredges, with additional charges of from $2,200 to $3,000 to deliver them in Philadelphia. Dump scows of 300 to 500 cu. yds. capacity were also in the lot at $5,000, while for tugboats prices ranging from $8,800 to $16,500 were asked.

Samuel Holmes, a ship broker, of New York, offered to supply everything from scows to clam shell and dipper dredges. Eleven tugs were offered for prices ranging from $9,000 to $26,000. All were of wooden hulls. Dredges were offered from $18,000 up to $65,000, the latter being seagoing hopper dredges. Scows were offered for $4,000 each.

The River & Harbor Improvement Co., Third and Chestnut Sts., Philadelphia, offered two scows of about 500 yds. capacity for $9,000 each. Bottom dump scows were also offered for $4,500.

EXAMINATIONS.

SUBINSPECTOR.—North Chicago, Ill.—An examination of applicants will be held at the Federal Bldg., Chicago, Ill., April 21, for the purpose of filling the position of subinspector (construction work), at $4 a day, at the U. S. Naval Training Station, Great Lakes, North Chicago. Detailed information concerning the examination is contained in Examination Order No. 100. Applications will be addressed to the "Commandant, U. S. Naval Training Station, Great Lakes, North Chicago, Ill.," and must be delivered to him on or before April 19. No application received after that date will be considered. Each applicant will state in his application his name, age, residence, citizenship, present occupation, and previous employment or work done.

INDUSTRIAL NOTES.

THE KING BRIDGE CO. announces the removal of its New York offices to the Hudson Terminal Bldg., 30 Church Street, New York City.

THE BERGER MFG. CO., Canton, Ohio, announces the death of W. W. Wallace, who had been the company's advertising manager for several years.

H. S. MORSE, Manager of the New York office of The Reeves Bros. Co., Alliance, O., has been made sales manager of the plate department with offices at Alliance.

THE WEBER CHIMNEY CO., Chicago, manufacturing reinforced-concrete chimneys, announces its removal to new offices in the Republic Building, 209 State St., that city.

A BRANCH OFFICE has been established by the Chicago Bridge & Iron Works, 105th and Throop Sts., Chicago, Praetorian Bldg., Dallas, Texas. The company makes a specialty of steel towers and tanks.

THE DAVENPORT LOCOMOTIVE WORKS, builders of light locomotives, Davenport, Iowa, announce that A. L. Hogenboeck, Vice-President in charge of commercial affairs, will hereafter be in charge of the sales department.

THE CONTRACT for the Panama Canal lock gates will be one of the largest steel contracts ever placed. It will call for approximately 58,000 tons of steel, and it is expected that the specifications will call for the complete erection by January 1, 1914.

JONES & LAUGHLIN, Pittsburg, have recently acquired the Nassau iron ore property on the Mesaba range. This contains about 4,000,000 tons of ore and adjoins the Long Year, another property belonging to the same firm, containing 3,000,000 tons.

C. DRUCKLIEB, 178 Washington St., New York City, announces that he has disposed of his interest in the manufacture and sale of the Injector Sand Blast Apparatus to James M. Betton, who has had the practical management of this branch of his business for the past five years.

DAVIS & BLAIR, general contractors, Pittsburg, Kans., have secured a contract for moving 2,500,000 cu. yds. of earth and loading 360,000 tons of coal for the Pittsburg, Midway, Kansas Coal Co. The work is being done with steam shovels and cableways.

THE INGERSOLL-RAND CO., New York City will install a complete compressed air equipment for the Geo. W. Jackson Co., of Chicago, for their contract on Section 54 of the Catskill Aqueduct at Yonkers, N. Y. The order covers compressors, drills, mountings and air reheaters.

IDLE CARS ON RAILWAYS of the United States increased during the fortnight ending April 2. The total idle equipment on all lines was 25,886 cars. This was partially caused by a slackening in the coal traffic due to the strike of the coal miners in the Illinois region.

MUNICIPAL BOND SALES during the first quarter this year were the largest ever recorded amounting to over $104,000,000. The largest previous total was in 1908, which amounted to $90,000,000. In the month of March alone this year the sales exceeded $68,000,000, which, however, included the New York City Bond Sale of $50,000,000.

THE CONTRACT FOR FURNISHING and installing electrical equipment for lighting and operating locks on the Erie, Champaign and Oswego Canals at several points was let last week to D'Olier Engineering Company, Philadelphia, Pa. The price was $178,197., and the engineer's estimate, $180,630, indicating rather careful work on the part of the estimating engineer.

INCREASED FACILITIES have recently been provided by the Northern Engineering Works, Detroit, Mich., in the form of new equipment. The new machinery purchased was largely in the shape of lathes, gear cutters and milling machines. This will enable the company to keep up with the demand for their standard electric traveling cranes.

THE MEXICAN OFFICES of the Hammond Iron Works, Warren, Pa., have been removed to the Olivares Bldg., Mexico City. This company make a specialty of steel plate construction. A feature of this work is steel cyanide tanks and the company has recently made an enviable record in shipping twelve tanks of the largest size 17 days after the order was received.

VERY LITTLE WAS ADDED to the railway milage in European countries last year, according to a report as Consular Agent, R. E. Mansfield Zurich. The total increase in 1909 on the railways in fourteen European countries was less than 1.2%. In the preceeding year the increase was 2.6%. The largest increase was in Germany where the additional railway built was approximately 500 miles making the total for Germany 36,701 miles.

THE WEST PULVERIZING MACHINE CO., Asheville, N. C., announces the purchase of about four acres of land between the right-of-way of the Southern Railway and the French Broad river where several new buildings will be erected. These will include machine, pattern, blacksmith and steel plate shops also a foundry. The buildings will be equipped with travelling cranes where ever needed.

FLEETS ON BOTH THE ATLANTIC and Pacific Oceans for the transportation of merchandise and passengers will be built by the Grand Trunk Railway. This announcement was made last week by C. M. Hays, the Pres. previous to his sailing for Europe. The Pacific service will probably be installed first because the Western end of the railway from Winnipeg to Prince Rupert will be constructed before the Atlantic end.

THE STEADY INCREASE in the average rate of wage paid to employees of the U. S. Steel Corporation is shown in a recent list of the number of employees and the wages paid. When the corporation was organized the average rate was $717. This declined to $677. in 1904, which was the lowest point, and quickly rebounded to $765. in 1907. During the year of depression 1908, the average rate was $729., but last year a new high record of $776 was established.

RECENT ORDERS RECEIVED by the Parker Boiler Co., 15th and Chestnut Sts., Philadelphia, include three for the John B. Stetson Co., aggregating over 1,500 HP. this being the fifth order taken for the equipment of that manufacturing establishment. Others noted are one 250 HP. boiler for a Maywood, N. J., concern; four 267 HP. boilers for the Nucoa Butter Co., Bayonne, N. J., and two 265 HP. boilers for the Belmont Iron Works, Eddystone, Pa.

THE CROCKER-WHEELER CO., Ampere, N. J., reports a number of sales of direct-current apparatus. Two 500-KW. generator sets have been sold to the Carnegie Steel Co., and one generator of the same size to another steel company. Two 250-KW. generators have been purchased by steel companies and a 250-KVA. engine type alternator to a silverware manufacturer. Miners and makers of miners' machinery have placed orders for four 200-KW. generators and a number of orders have been booked for smaller apparatus.

PERMANENT IMPROVEMENTS for factories and public works are illustrated in a recent folder sent out by the Anchor Post Iron Works, 165 Broadway, New York City. While the fencing made by this company is largely used by industrial works, one 3,200 ft. in length is shown surrounding the plant of the Crocker-Wheeler Co., Ampere, N. J., and a 7,100 ft. fence was built by the American Locomotive Co., around its montreal works. It is also extensively used by cities in protecting watersheds. The anchor post requires no digging but are driven into even rocky ground.

A NEW RECORD FOR BLAST HOLE drilling was made in the limestone quarries of the Dolese-Shepard Co., by a Cyclone blast hole drill fitted with electrc power and a special outfit of tools suitable for drilling 5⅝-in. holes to an average depth of 40 ft. The material drilled was limestone of more than the average hardness, and the total number of feet drilled from February 3 to March 8, inclusive, was 1,623; number of hours worked, 285; averaging 5.7 ft. per hour. No repairs were required on the machine or tools for the entire run. The drill was made by the Cyclone Drill Co., Orrville, Ohio.

THE BLAW COLLAPSIBLE STEEL CENTERING CO., Pittsburg, has acquired the plant formerly operated by the Pittsburgh Industrial Iron Works, at Reynoldsville, Pa. The property comprises about ten acres of land, with one main building, 100 × 220 ft., a power plant building, a 2-story concrete office building and a warehouse. The purchased works formerly turned out boilers and other plate products, necessitating only a slight rearrangement of the equipment to enable the Blaw company to manufacture its collapsible steel centers or forms for concrete sewers, mine shafts, etc., to advantage. The company for years has operated a plant at Rankin, Pa.

THE ALLIS-CHALMERS CO., Wilwaukee, Wis., reports the following orders for equipment for Portland cement plants. The Kirkfield Portland Cement Co., Raven Lake, Ontario, is largely increasing the capacity of its plant and has ordered a rotary kiln 8 × 125 ft. The United States Portland Cement Co., is improving its plant at Concrete, Colo., by the addition of new machinery. It has awarded a contract for a rotary kiln 8 × 12 ft., complete with stack and feeder. The Atlanta & Gulf Portland Cement Co., Nazareth, Pa., is building a new cement plant at Ragland, Ga., its order will include one No. 7½ Gates gyratory crusher, one No. 4 crusher of the same style and one No. 8 ball mill.

PORT LOS ANGELES is now the second largest lumber port in the United States. Figures have recently been compiled which show the receipts last year were approximately 500,000,000 ft., consisting of redwood, Douglas fir and yellow pine brought from the Northwest. The ports in San Francisco Bay received a total of 900,000,000 ft. last year. New York's coastwise receipts of Southern pine, for the year ended December 25, were a little fewer than 490,000,000 ft. Chicago received by water, for the full calendar year 1909, not quite 340,000,000 ft. of all kinds of lumber exclusive of logs: North Tonawanda, N. Y., received more than 170,000,000; Ludington, Mich., nearly 80,000,000; Cleveland, about 72,000,000, and Detroit a little more than 66,000,000 ft.

A 750-KW. LOW PRESSURE WESTINGHOUSE steam turbine is being added to the power plant of the Corr Mfg. Co., East Taunton, Mass., to utilize the exhaust of Corliss reciprocating engines. The steam supplied the turbine is at nearly the pressure of the atmosphere, 15 lbs. absolute, and the turbine is served by a Westinghouse-Leblanc condenser, which maintains a vacuum of about 28 ins. The generating apparatus, driven by the low-pressure turbine, is a 940-KV. ampere, turbine-type alternator furnishing 3-phase, 60-cycle current at 600 volts. The distribution lines at this voltage supply a number of 100-HP. motors in the weave sheds, serving as economical auxiliaries to the older system of belting and line-shaft transmission from the engine to the machines driven.

AN INTERESTING PIECE of salvage work has been accomplished in the Mississippi River near New Orleans. A barge load of spikes in kegs was sunk and an electro magnet weighing 3,000 lbs. and 3¼ ft. in diameter, made by the Cutler-Hammer Co., Milwaukee, Wis., was used to raise them. The electric current was turned on when the magnet was in close proximity to the kegs, and five or six kegs were raised at each lift, a crane being employed for the purpose. Since the spikes weigh 200 lbs. to the keg, the magnet lifts from 1,000 to 1,200 pounds each trial. Through the use of the magnet the kegs are raised intact, and the spikes are uninjured except for slight rust. A load of cotton ties sunk near Natchez will be tried next, and the third experiment will be a load of woven wire, sunk near Pittsburg.

MINNEAPOLIS RAILROAD IMPROVEMENTS of considerable magnitude will be started this year and the eventual cost will be approximately $10,000,000. The Northtown cut-off will enable the Great Northern Ry. to shorten its distance from the northern entrance to the city to the Union Depot from five to three miles and the Northern Pacific Ry. will avoid entry through the congested Omaha and Soo Line yards. The cut-off will be elevated 15 to 22 ft. above the street level.

The Minnesota Railway Transfer, which now operates what is prabably the third largest yard in the United States, ranking after Pittsburg and the suburban New York yards, has bought 250 acres of land near New Brighton, and plans track-laying and improvewent work that will greatly increase its handling facilities.

THE ALLIS-CHALMERS CO., Milwaukee, Wis., states that a sales report of its steam and electrical department shows how favorably the steam turbine has been received as a prime mover by users of power. A little over four years ago the company obtained the right to manufacture in the United States an improved type of Parsons turbine. The end of the first year saw only one unit in operation; but since then there has been a steady and rapid growth in sales, which has reached a total capacity of over 300,000 HP. Of this aggregate 48.2% was sold during 1909 and 20.6% have been placed on orders in 1910. About 40% of the units have been for use by power, lighting and railway companies, textile manufacturers being next with 14%. Practically every type of industrial enterprise is represented in the buyers of these turbines.

ENLARGEMENT OF THE PLANT of the Pierce Arrow Motor Car Co., Buffalo, goes on actively. The last of a series of five contracts has just been placed with the Aberthaw Construction Co., Boston, Mass. This contract is for an addition to the office building of about 200 ft., practically doubling the length of the present building. The new part will be joined to the present office building which it will resemble in appearance, general arrangement, and interior finish.

This contract also provides for a number of tunnels connecting various buildings. This will complete all the improvement work contemplated for this year; the previous contracts with the Aberthaw Co., providing for storage, nickel-plating, and truck assembly buildings, an addition to the motor testing building, a new garage and additions and improvements to the power plant. All the buildings are of reinforced concrete.

THE B. M. OSBUN CO., with offices in the Commercial Bank Bldg., Chicago, Ill., has been appointed by the Abendroth & Root Mfg. Co., Newburgh, N. Y., as their representative covering the Chicago territory for the sale of their Root spiral riveted pipe and Root water tube boilers. These products have been on the market for over 40 years and are in service in nearly all parts of the world. Some recent installations of the spiral riveted pipe, in prominent buildings, are the exhaust steam lines for the Singer Building and the City Investing Building, in New York City. Large quantities of this pipe in various sizes have been used for the compressed air lines during the constructions of the tunnels under the Hudson and the East Rivers; also for water pipe for the new Torresdale filtration plant for the city of Philadelphia. Both boilers and large quantities of their spiral riveted pipe have been shipped to Panama at various times and are in service there.

THE LARGEST SINGLE CONTRACT for vault light work ever taken is now nearing completion. It consists of all the vault light work in the train shed, concourse, station, and sidewalks surrounding the new Pennsylvania Terminal in New York City. In all approximately 150,000 sq. ft. of vault light will be installed, nearly four acres. The contractors for this work, Tucker & Vinton, 41st St. and Park Ave., New York City, have in the past taken contract for notable work, especially that of the Rapid Transit Subway in New York. This was nearly as large as the Pennsylvania Station, but was let in four separate contracts. This company also did the work for the Philadelphia Rapid Transit Co., and Union Station in Washington, and has a portion of the contract for the new Grand Central Station in New York. A rather unique departure was made from the ordinary vault light work in the Pennsylvania Station, each lense, which has a diameter of 2¾-in., is surrounded by a lead ring moulded on the glass. This has a threefold use, it lessens the danger of breakage, due to the difference in expansion between the concrete and glass; it will permit of a closer union and should the lense be broken a new one can be easily replaced.

NATIONAL EMPLOYMENT EXCHANGE.—A commendable form of philanthropy has been started in New York City in the form of an employment exchange. Labor is the most valuable by far of all commodities bought and sold; but the marketing of labor is done in a far cruder and more unsystematic manner than the marketing of any commodity. The statement of the orthodox economists that the price of labor should be governed by the law of supply and demand is vitiated by the fact that the law of supply and demand can only have free operation where there exists an open general market. In the hope of remedying some of the evils, due to lack of employment, the National Employment Exchange was chartered in New York City last year and $100,000 was subscribed to its capital by such men as R. W. De Forest, E. H. Gary, John R. MacArthur and others. The Association is conducted as a business and not as a charity and maintains an office for manual labor at 14 State St. and a bureau for clerical and similar positions at 47 West 42d St. Mr. Edward W. Carpenter is Manager.

THE DRILLING CONTEST held in the Transvaal a few years ago was evidently the incentive for similar contests in other parts of the world. A report of a contest held in Cripple Creek, Colo., last month is reprinted from the Cripple Creek "Times," as follows:

"The drilling contest between the Waugh and the Shaw drills, commonly called 'buzzers,' was held yesterday at the Vindicator No. 6 shaft, for a $400 purse, and the speed attained by each was something remarkable; a few years ago it would have been considered an impossibility. In the palmy days of expert hand drillers and big machine piston drills, records like yesterday's were unheard and undreamed of. No one invention of recent years has done so much to reduce the cost of mine operation as buzzer drills, and one prominent mine superintendent whose property is on the dividend paying basis, asserts that without buzzer drills dividends would be impossible for his company, and probably the mine would be either closed, or under the lease system.

"The ground picked out for yesterday's contest (March 15) was what is known on the Vindicator as the black syanite, and those who have worked in it, better than anyone else, know what kind of ground it is to drill. The drills were in operation within a few minutes of an hour and a half, the Waugh drilling 49 ft. 10½ ins., and the Show 35 ft. 9½ ins. The air line from which the machine operated was 1½ ins. to within 100 ft. of the drills, then reduced to 1 in., and the hoses, fed from that, the Waugh running off 75 ft. of ¾-in. hose, and the Shaw off 50 ft. of same sized hose. The Waugh used was the regular 8C and the Shaw was their new style drill, a 10A. The Waugh weighed 62 lbs., and the Shaw 78 lbs. Notwithstanding the weight and the small air connections of the Waugh it has never been beaten in a drilling contest in the district, and a great many of them have been sold here during the past six years."

(Continued on page 155.)

CONTRACT PRICES.

(denotes that this work is advertised in Engineering News.)*

*HIGHWAYS.—New York State.—Bids were received April 4, 6 and 8 for the improvement and reconstruction of about 190 miles of highways. In the accompanying table is given the road number, name, location, length and total cost. The average cost per mile has been computed and is given in the last column. The names of the bidders, the award of the contracts and amount of bid are given in another part of this supplement.

Road No.	Name and County.	Length, miles.	Total cost.	Cost per mile.
492	Lake Road, Monroe	5.75	$40,500	$7,043
494	East Henrietta—Rochester, Monroe	4.43	48,800	11,015
542	School House—Caroga Creek	2.69	30,995	11,892
555	Syracuse—Chittenango, Onondaga	7.79	85,741	11,006
596A	Norwich—South New Berlin, Chenango	0.34	4,600	13,526
598A	Norwich—Preston, Chenango	0.22	5,900	26,818
628	Rock City—Lafayetteville, Dutchess	4.66	40,800	8,614
661	Oswego—Fruit Valley, Oswego	3.58	33,688	9,692
664	Otselic—South Otselic, Chenango	4.33	43,188	9,951
682	Ithaca—Dryden, Thompkins	3,95	40,177	10,171
683	Bryden—Cortland, Thompkins	3.57	38,444	10,769
686	Weedsport—Cato, Cayuga	8.72	101,900	11,685
715	Dansville—Mount Morris, Livingston	4.54	55,792	12,509
729	Shawnee—Cambria, Niagara	3.20	23,300	7,281
740	Sanborn—Pekin, Niagara	2.75	26,950	9,763
746	Carley's Mills—Parish, Oswego	1.12	9,890	8,830
755	Altamont—Knox, Albany	4.25	45,540	10,715
761	Deansboro—New Hartford, Oneida	6.32	63,014	9,970
786	Cherry Valley—Roseboom, Otsego	3,76	35,803	9,535
787	East End, Otsego	0.47	5,700	12,128
801	East Rushford—Gordonville Bridge, Allegany	4.68	43,017	9,187
811	Georgetown—Otselic, Madison	2.39	23,749	9,937
812	Canastota—South Bay, Madison	4.81	46,944	9,552
823	Falls Mills—Callicoon, Sullivan	4.82	59,944	12,436
834	Kirkwood—River, Broome	7.50	75,676	10,090
845	Spencer—Candor, Tioga	4.05	32,945	8,134
*846	Sag Harbor—Easthampton, Suffolk	5.30	62,300	11,755
847	Copenhagen—Lowville, Lewis	5.74	62,558	10,898
848	Long Lake—Grove, Hamilton	3.76	44,900	11,675
850	Caton—Corning, Stuben	6.25	61,263	8,134
851	Hilton Village, Monroe	1.11	14,000	12,612
852	Meridian Village, Cayuga	0.81	11,800	14,691
853	Batavia—Elba, Genesee	4.07	16,184	3,976
854	Castile Center—Perry Center, Wyoming	4.50	54,925	12,205
855	Mount Morris Village, Livingston	0.47	7,300	15,531
856	Geneseo Village, Livingston	1.32	16,900	12,803
857	Roberts Road, Chautauqua	1.62	32,486	20,053
5008	Jericho Turnpike, Suffolk	3.56	38,596	10,841
5015	Canandaigua Village, Ontario	1.19	22,000	18,487
5036	Lowville—Martinsburg, Lewis	2.61	33,800	12,563
5037	Richfield Springs—Schuyler Lake, Otsego	3.50	39,092	11,169
5038	County Line—Hope Center, Hamilton	3.00	37,974	12,658
5039	West Berne—Gallupville, Albany	4.01	61,989	15,458
5040	Hoosic Falls Village, Renssalaer	1.56	51,900	33,269
5041	Lima—East Bloomfield, Ontario	2.41	34,500	14,315
5042	Auburn—Seneca Falls, Seneca and Cayuga	3.33	55,500	16,696
5043	Ithaca—Danby, Tompkins	2.59	32,800	12,664
5044	Mexico—Union Square, Oswego	3.50	38,640	11,090
5045	Deposit—Hale's Eddy, Delaware	3.04	46,764	15,382
5046	Scottville—Muford, Monroe	5.77	57,906	10,036
5047	Watkins—Montour Falls, Schuyler	1.64	23,043	14,044
5048	Lowman—Waverly, Chemung	2.50	35,310	14,124
5049	Waverly—Owego, Tioga	2.58	31,307	12,134
5051	Little Neck—Old Westbury, Nassau	1.97	24,955	12,621
5052	New Hartford Village, Oneida	0.65	18,765	28,869
5053	Levant—Poland Center, Chautauqua	2.54	33,596	13,219
5054	Eighteen Mile Creek, Erie	2.00	28,000	14,000
5055	Riverside—Watertown, Warren	1.65	25,490	15,448

*CANAL WORK.—New York State.—The item prices of the bids received April 7 by F. C. Stevens, Supt. Public Works, Albany, for Barge Canal Contract No. 90, providing, for furnishing and installing equipment for operating and lighting locks on the Erie, Oswego and Champlain canals, were A, Engineer's estimate; B, North East Construction Co., 225 Fifth Ave., New York; (C) D'OLIER ENGINEERING CO., South 11th St., Philadelphia, Pa. (awarded contract):

	A.	B.	C.
200 cu. yds. excavation	.40	.45	.45
310 cu. ft. chipping concrete	1.50	.60	1.40
200 cu. yds. forming embankment	.30	.35	.30
44 cu. yds. second-class concrete	8.00	7.00	[illegible]
380 cu. yds. first-class reinforced concrete	16.00	18.40	[illegible]
203,000 lbs. structural steel	.05	.0525	.0475
24,000 lbs. reinforcing steel	.04	.04	.04
153,000 lbs. iron castings, plain	.04	.035	.035
4,400 lbs. iron castings, machined	.05	.06	.055
21,600 lbs. metal ducts	.09	.1075	.085
200 sq. yds. repaving gutters	.50	.60	.50
60 lin. ft. wrought iron pipe railing	1.00	1.15	[illegible]
10,200 lin. ft. concrete conduit, single duct	.45	.43	[illegible]
3,720 lin. ft. concrete conduit, double duct	.60	.61	[illegible]
930 lin. ft. reinforced-concrete conduit, double duct	.60	.65	[illegible]
470 lin. ft. drilling, 1½-in. holes for ducts	1.00	.60	[illegible]
280 lin. ft. drilling 3-in. holes for ducts	2.00	1.20	[illegible]
500 lin. ft. 3-in. fiber duct	.10	.10	[illegible]
30 squares, 100 sq. ft. roofing	5.00	5.00	[illegible]
71,300 lbs. lead-covered rubber insulated conductors	.18	.1575	[illegible]
750 sq. yds. painting	.20	.20	[illegible]
4 generators with switchboards, locks 12 and 14	1,600.00	1,650.00	[illegible]
4 generators with switchboards, locks 9 and 11	3,000.00	2,330.00	[illegible]
8 governors	1,350.00	1,040.00	[illegible]
2 head gates, lock 11	110.00	120.00	[illegible]
4 head gates, locks 9 and 24	180.00	170.00	[illegible]
2 head gates, lock 12	400.00	360.00	[illegible]
3 traveling cranes, locks 9, 11 and 24	390.00	345.00	[illegible]
10 electric capstans	1,000.00	700.00	[illegible]
4 turbine machinery, locks 9 and 11	650,00	690.00	[illegible]
2 turbine machinery, lock 12	1,300.00	1,550.00	[illegible]
2 turbine machinery, lock 24	1,600.00	1,920.00	[illegible]
1 doors, windows and woodwork, lock 12	125.00	115.00	125.00
3 doors, windows and woodwork, locks 9, 11 and 24	175.00	175.00	175.00
1 miscellaneous electrical equipment, lock 8	1,680.00	1,715.00	[illegible]
2 miscellaneous electrical equipment, locks 1 and 7	2,985.00	3,290.00	[illegible]
1 miscellaneous electrical equipment, lock 2	3,585.00	4,600.00	[illegible]
4 miscellaneous electrical equipment, locks 9, 11, 12 & 24	3,905.00	4,483.00	[illegible]
8 maintenance accessories	25.00	25.00	30.00
1 coffer-dams, pumping, bailing and draining, lump sum	100.00	100.00	100.00
126,000 lbs. valve operating machinery	.10	.11	[illegible]
199,000 lbs. gate operating machinery	.12	.13	.115
90 lamp poles	45.00	42.00	50.00
28 3-HP. motors	200.00	200.00	240.00
32 7½-HP. motors	250.00	270.00	280.00
Totals	$180,630	$179,983	$178,197

VALVES AND PIPE.—Los Angeles, Cal.—Bids were received by the Board of Water Comn., James P. Vroman, Secy., for furnishing pipe and valves. The contract for furnishing c.-i. water pipe was awarded the UNITED STATES CAST IRON PIPE & FOUNDRY CO., at the following prices: 36-in., $34.25; 12 to 6-in., $33 25; 4-in., $34.25. These prices were for small lots. The contract for two 20-in. gate valves, flanged, was awarded to the PACIFIC COAST SUPPLY CO., at $125.50 each. The CRANE CO. secured the contract for gate valves at the following unit prices: 18 valves, 12-in., $30.55 10 valves, 10-in., $22.06; 15 valves, 8-in., $13.45; 200 valves, 6-in., $7.44; 250 valves, 4-in., $4.91.

PAVING.—Salt Lake City, Utah.—Bids were received by C. F. McGouagle, Engr. April 1, for paving work from (A) P. J. Moran. The items are as follows:

	A
660 lin. ft. roadway, 80 ft. wide	$9.446
2,772 lin. ft. roadway, 54 ft. wide	5.1004
610 cu. yds. excavation	.87
109 lin. ft. curved gutter, 6 × 16 × 21-in.	1.60
505 sq. yds. asphalt paving	2.55
854 sq. ft. cement sidewalk	.07
3 manhole covers	20.
3 cleanout boxes	27.20
Total	$23,495
Time	90 days

*WATER-WORKS EXTENSION.—Lebanon, Pa.—Bids were received by the Board of Water and Lighting Commissioners, J. D. Kerr, Secy., on March 25, for about 29,100 lin. ft. of 20-in., 3,700 lin. ft. of 16-in., 13,900 lin. ft. of 31-in., and 3,900 lin. ft. of 10-in. pipe. T. R. Crowell is City Engr.

The bidders for the new pipe line were: (A) JOHN D. KUHN (awarded contract); (B) W. G. Fritz & Bro.; (C) United Ice & Coal Co.; (D) United States Const. Co.; (E) Pitt Const. Co.; (F) Antonio Cocco; (G) James Ferry & Son; (H) M. O'Herron; (I) B. F. Sweeten & Son; (J) Weaver Const. Co.; (K) John I. Dick; (L) Hawman Bros..

The bidders for the improvement of distribution system were: (A) W. F. CHISHOLM (awarded contract); (B) Partridge & Slow; (C) Antonio Cocco; (D) B. F. Sweeten & Son; (E) United Ice & Coal Co.; (F) United States Const. Co.; (G) John I. Dick; (H) James Ferry & Son; (I) Hawman Bros.; (J) Weaver Const. Co. The itemized bids were as follows:

New Pipe Line.	A	B	C	D	E	F	G	H	I	J	K	L
926 cu. yds. excavation through breast of Dam No. 1, including backfilling and shoring	$1.00	$0.90	$1.05	$1.00	$1.50	$1.25	$1.50	$1.50	$1.00	$0.90	$1.60	$1.05
100 cu. yds. excavation other than above but exclusive of pipe trenches	.60	1.60	1.05	1.00	1.00	1.00	2 00	1.50	1.00	1.30	2.40	.55
15 cu. yds. concrete, casing intake tower (if built)	9.00	15.00	10 50	8.50	10.00	15.00	12.00	12.00	15.00	10.00	14.50	16.00
45 cu. yds. concrete other than above for valve pits, cut off walls, etc.	6.00	15.00	10.50	8.50	10 00	7.00	11.00	12.00	10 00	8.00	12.00	9.00
110 sq. yds. replacing old stone on dam breast with concrete filling	.30	1.00	1.10	1.00	1.00	2.00	1.00	2.00	1.00	1.30	3.70	1.10
84 lin. ft. 6-in. cast-iron pipe laid complete exclusive of valves and valve boxes	.80	.75	1.00	.89	1.00	1.00	1.00	.50	1.50	.78	1.85	.87
300 in. ft. 6-in. terra cotta pipe laid complete	.45	.40	.50	.35	.50	.70	.75	.60	.50	.30	.80	.42
15,486 lin. ft. 20-in. pipe, Class A, laid complete, including trenching and backfilling	2.70	2.75	2.74	2.87	2.84	2.99	3.70	3.33	3.41	3.58	3.70	4.05
13,764 lin. ft. 20-in. pipe, Class B, laid complete, including trenching and backfilling	3.00	3 05	3.11	3.10	3.13	3.32	3 45	3.64	4.11	4.00	3.99	4.25
11,008 lbs. specials, including Y's, tees, etc., complete in place	.03½	.04	.04	.04	.03½	.05	.06	.04	.04	.04	.05	.03½
7 gate valves, 6-in. (not geared), in place	14 00	12 00	14 00	11.00	13 00	15 00	19.00	12.06	12.50	15.75	12.00	13.75
9 gate valves 20-in., geared, in place..	133.00	120 00	115.00	110.00	110.00	111.00	140.00	120.00	115 00	142.00	126.00	115.00
7 iron pit covers in place complete with locks, etc.	22 00	7 00	25 00	20 00	10 00	25.00	20.00	30.00	20.00	15 00	2.75	26.50
16 air valves complete in place	17 00	20.00	15 00	12 00	20 00	15.00	18.00	20.00	15.00	25.00	13.00	15.00
21 cast iron valve boxes	4.00	3.00	25.00	4.00	5 00	5.00	7.00	4.00	4.00	5.00	3.76	73.25
Erecting intake tower and bridge in place, lump sum	90 00	50.00	250.00	150.00	100.00	1,200.00	400.00	700.00	300.00	100.00	125.00	80.00
Tower house and slope steps complete, lump sum	650 00	450 00	450 00	275 00	200 00	700.00	800 00	500.00	700.00	500 00	485.00	800.00
25 line markers	6 00	1.00	7.00	5.00	4.00	10.00	9.00	8.00	6.00	3.00	2.75	4.50
Totals	$87 811	$89.314	$90.688	$91.412	$91.856	$98.636	$101.764	$107.898	$114.641	$115.381	$118.250	$127.680
Time to complete, working days	125	120	135	150	120	90	150	120	120	250	180	250

Improving Distribution System.

	A	B	C	D	E	F	G	H	I	J
4,800 cu. yds. of pipe trenches without classification	$10 85	$.058	$1.00	$1.75	$2.40	$2.00	$2.45	$3.00	$1.00	$1.61
4,800 cu. yds. backfilling	.20	.12	.20	.15	.10	.20	.25	.25	.15	.40
3,721 lin. ft. 16-in. pipe laid complete exclusive of valves, specials, trenches and backfilling	1.85	2.24	1.90	2.20	1.90	2 20	2 79	2.05	2.50	3.28
14,000 lin. ft. 12-in. pipe laid complete as above	1.30	1.31	1.27	1.55	1.30	1.46	1.27	1.40	1.80	2.00
3,966 lin. ft. 10-in. pipe laid complete as above	1.05	.98	1.00	.90	.90	1.20	1.12	1.05	1.50	1.75
36 lin. ft. 8-in. pipe laid complete as above	.80	.72	1.00	.85	1.00	1.00	.95	1.50	1.15	.99
36 lin. ft. 6-in. pipe laid complete as above	.60	.44	1 00	.70	1.00	.89	.85	1.40	.95	.78
36 lin. ft. 4 in. pipe laid complete as above	.40	.27	1.00	.60	1.00	.45	.45	1.30	.75	.49
32,300 lbs. specials, including crosses, tees, etc.	.03	.05	.04	.04	.05	.04	.05	.05	.03½	.03½
7 gate valves, 16-in., laid complete	62 00	63 00	62 30	65.00	70.00	62.00	76 80	80.00	66 00	75.00
56 gate valves, 12-in., laid complete	29.50	32 00	31 70	32 00	40 00	27 50	30.50	38.00	32.00	48.00
19 gate valves, 10-in., laid complete	23.50	23 35	26 00	25.00	35.00	23 00	27.50	32 00	27.50	30.00
2 gate valves, 6-in. (blow-offs), laid complete	11 00	12 25	14 00	13.00	20 00	10.00	12.25	17.00	14.00	15.00
12 gate valves, 8-in., furnished by the city, laid complete	2 00	1.50	3.00	3.50	8 00	2.00	3.75	7.00	2.65	5 00
20 gate valves, 6-in., furnished by the city, laid complete	1 80	1 00	2 00	3.00	6.00	1.50	3.50	6.00	2.65	5.00
10 gate valves, 4-in., furnished by the city, laid complete	1.10	1.00	1 50	2.50	5.00	1.00	2.75	5.00	2.15	4.00
11 cast iron valve boxes, 16-in.	3 50	3 25	5.00	4 00	20.00	6.00	3.50	6.00	....	10.00
77 cast iron valve boxes, 12-in. and less	3.50	3.00	5.00	4.00	20.00	4.00	3.50	5.00	....	7.50
6 air valves complete in place	13.00	15 00	15.00	15 00	15.00	14.00	13.00	17.00	15.00	24.00
16 connections, fire hydrants complete	2.00	15.00	6.00	20.00	25.00	15.00	4.50	15.00	8.00	5.50
Totals	**$38.738**	**$38.934**	**$39.426**	**$47.820**	**$48,513**	**$48,519**	**$50,653**	**$53,136**	**$56,779**	**$62,938**
Time to complete, working days	**100**	**90**	**90**	**120**	**125**	**150**	**180**	**100**	**200**	**250**

INDUSTRIAL NOTES.

(Continued from page 153.)

CHINESE RAILROAD DEVELOPMENT is of especial interest in diplomatic and financial circles at the present time, but it promises to become a matter of considerable interest to engineers in the future. The Aigun and Kinchow (Chinchow) R. R. has been the subject of many diplomatic notes recently. This road, according to the London Economist, will run from Kinchow, a railroad center and seaport in South West Manchuria, north through the provinces of Pechili and Mongolia. The latter province is sparsely settled, but has an important deposit of coal and metals. It will cross the Chinese & Eastern Ry. (a continuation of the Trans-Siberian) at Tsitsikar, thence north across Manchuria to Aigum on the Amur River. The road will be about 800 miles long and the estimated cost is £8,000,000. A reconnassiance was made by a British firm of engineers. A more ambitious but less likely, for the present, scheme is a road from Pekin to Kaikhta, a Siberian village south of Lake Baikal. This would be about 1,000 miles long and would traverse the interior of Mongolia. A road about 100 miles long has been completed from Pekin to Kalgan, which would form a part of this new line.

THE LARGEST CONTRACT for mining machinery let in years was closed by the London office of the Allis-Chalmers Co., Milwaukee, Wis., last week. The order calls for a complete copper producing plant with a yearly capacity of 900,000 tons of ore to be built near Lake Tanganyika, in the Congo territory. It is stated that since the first of the current fiscal year the bookings of the company have been approximately 40% better than for the corresponding period in 1909, while the output has increased about 20%. The company also reports that it has the contract for generating and motor equipment of the new cereal factory of the Quaker Oats Co., at Akron, O. The Ogden (Utah) Rapid Transit Co. has in its hydro-electric plant an alternator coupled to the shaft of a turbine. As this turbine has considerably more power than is required for the alternator, the company plans to couple a 300-KW. 550-volt Allis-Chalmers generator to the end of the alternator shaft. The Superior Portland Cement Co., Seattle, Wash., has aslo placed an additional order for a 250-KW., 3-phase, belt-driven alternator and a 9-KW., 120-volt exciter for the same. The Aberdeen (Wash.) Lumber & Shingle Co. is installing electric drive in part of its mill. The machinery includes one 115-KW., 400-volt, 3-phase Allis-Chalmers belted alternator, one 6½-KW., 120-volt exciter, two 50-HP. squirrel cage induction motors, and a switchboard.

THE DEMAND for railroad equipment is very large. At no time since 1907 have the railroads been such large purchasers of rolling stock. Negotiations are under consideration for 2,650 cars for the Missouri Pacific; 1,000 gondolas for the Louisville & Nashville; 1,500 for the Chesapeake & Ohio; 600 for the Western Maryland, in addition to the 1,000 purchased early in the month; 3,700 for the Southern Ry., including 1,000 to be built in its own shops; 300 for the Norfolk & Western; 1,500 for the Rock Island, and 6,000 for the Great Northern. The C., H. & D. an additional 1,000 from the American Car & Foundry Co. The B. & O. inquiry for 10,000 cars is still in a tentative state, and while the Burlington is also expected to contract for 10,000 cars, specifications are out only for 1,000. The Harriman Line contracts will probably greatly exceed the inquiries now out. The Pennsylvania will be in the market for more equipment, but this will be for all steel cars. The Colorado & Southern is in the market for 1,500 and the Grand Trunk has inquiries in the market for 3,500 cars of different kinds. The New York Central lines are making inquiries for 2,500 more cars. Motive power is not in as active demand, but the Pennsylvania has ordered 90 locomotives, to cost $1,800,000, from the American Locomotive Co.; the New York Central has ordered six; the Boston & Maine, ten. The Southern is in the market for 75 locomotives of various types.

TRADE PUBLICATIONS.

REINFORCED CONCRETE CALCULATIONS.—Trussed Concrete Steel Co., Detroit, Mich. Card; 3½ × 6¼ ins.

This card has a circular slide rule of scale of celluloid showing the thickness and steel reinforcement for concrete slabs of given span and loading.

STEEL AND CONCRETE PILING.—Interlocking Tube Co., 79 Dearborn St., Chicago, Ill. Paper; 9 × 6 ins.; pp. 25; illustrated.

The description matter consists of extracts taken from an article in Engineering News of Feb. 3, but without giving any credit to that article. A number of illustrations are included.

SURVEYING INSTRUMENTS.—Wm. Ainsworth & Sons, Denver, Colo. Paper; 6 × 9 ins.; pp 63; illustrated.

This is the latest catalog issued by the Ainsworth Co. on their precise transits, theodolites and levels. In addition, some space is given to the smaller instruments, such as pocket transits, barometers, clinometers, etc.

PORTLAND CEMENT.—Virginia Portland Cement Co., Fordwick, Va. Paper; 6 × 9½ ins.; pp. 138; illustrated.

The Virginia Portland Cement Co. has a capacity of a million barrels a year, and is located far enough south so as to have a field quite to itself. The present catalog gives photographs of a number of structures built with "Old Dominion" as a base.

RAIL JOINTS.—Max Barschall, Nice-Cimiez, France. Paper; 8½ × 10¾ ins.; pp. 28; illustrated.

This is a compilation of correspondence with American railway officials regarding the merits of a joint in which the outside splice bar is so shaped that the wheel tread will take a bearing upon it at the gap between the rail ends.

SIMPLEX WATER METERS.—Simplex Valve & Meter Co., 112 North Broad St., Philadelphia, Pa. 4 Circulars; paper; 9 × 6 ins.; pp. 39; illustrated.

A number of circulars relating to water meters for large pipes, controlling valves for reservoirs, etc., rate-of-flow controllers, automatic air valves, etc., are being issued from time to time by this company. They will soon be brought together in a catalog.

IMPACT SCREENS FOR SIZING PULP.—Colorado Iron Works Co., Denver, Colo. Pamphlet No. 9-B. Paper; 6 × 9 ins.; pp. 11; illustrated.

The action of the impact screen and results obtained in operation are described here. The screen is used for sizing pulp between about ½-in. and 80 or 100-mesh.

REINFORCED-CONCRETE CHIMNEYS.—The Weber Chimney Co., 1908 Republic Building, 209 State St., Chicago. Paper; 4 × 9 ins.; pp. 31; illustrated.

This contains descriptions of the company's cylindrical and tapering chimneys and the features of their design. Several pages are occupied by a partial list of chimneys built, with their dimensions and the names of the plants or companies using them. There are also numerous illustrations.

CONCRETE FOR DRAIN TILES AND FARM WORK.—Universal Portland Cement Co., Chicago and Pittsburg. Paper; two pamphlets; 6 × 9 ins.; pp. 30 and 64; illustrated.

The pamphlet on drain tile present the results of an investigation made by the company's inspection bureau, which results give evidence of the durability and extensive use of both drain tile and sewer pipe made from Portland cement. Numerous records and photographs are given. The other pamphlet discusses the use of concrete on farms, and includes such work as houses and barns, drinking tanks and troughs, mangers, cisterns, catch-basins, etc. Details are given as to the proportioning and preparation of the concrete, and the construction of the forms, while numerous illustrations show forms for various structures.

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4-19*	Paving, Dunkirk, N. Y	4- 7
4-19	Paving, etc., New York	4-14
4-19	Paving, Macon, Ga	4-14
4-19	Paving, Butler, Mo	4-14
4-20	Paving sand, New York	4-14
4-20	Paving, etc., New York	4-14
4-20	Grading, etc., Gettysburg, Pa	4-14
4-20	Road, Cleveland, Ohio	3-31
4-20	Macadam, Columbus, Ohio	3-31
4-22*	Paving, Lansdowne, Pa	4- 7
4-22	Roads, Concord, N. H	4-14
4-23	Gravel roads, Terre Haute, Ind	4-14
4-23	Gravel road, Marion, Ind	4- 7
4-25	Road, Ft. Rosecrans, Cal	4- 7
4-25	Macadam, Xenia, Ohio	4- 7
4-25	Sidewalk, Yorkton, Sask	4-14
4-25	Paving, etc., Oil City, Pa	4-14
4-25	Highway, Prescott, Ariz	4-14
4-27	Sidewalk, etc., Attalla, Ala	4-14
4-27	Paving, fences, etc., New York	4-14
4-28	Resurfacing, Des Moines, Iowa	4- 7
4-29	Road, Cincinnati, Ohio	4- 7
4-29*	Paving, Norfolk, Va	4-14
4-29	Road, Cincinnati, Ohio	4-14
4-29	Road, Concord, N. H	4-14
5- 2	Gravel road, Greencastle, Ind	4-14
5- 2	Gravel road, Danville, Ind	4-14
5- 2	Paving, Weston, Ohio	4- 7
5- 2	Paving, etc., Havre, Mont	4- 7
5- 3*	Paving, etc., Wenatchee, Wash	4-14
5- 3	Macadam, Wabash, Ind	4-14
5- 3	Gravel road, Kokomo, Ind	4-14
5- 3	Gravel road, Vincennes, Ind	4-14
5- 3	Macadam, Sikeston, Mo	4-14
5- 3*	Paving, Clinton, Okla	4-14
5- 5	Gravel road, Greencastle, Ind	4-14
5- 9	Macadam, Steubenville, Ohio	4-14
5-23	Stone road, Jeffersonville, Ind	4-14

Miscellaneous.

4-15	Tile, Woodstock, Ill	3-24
4-15	Crematory (Garbage), West Point N. Y.	3-24
4-15	Sand, Atlanta, Ga	4- 7
4-15	Drainage ditches, St. Paul, Minn.	4-14
4-15	Stone, Wash., D. C	4-14
4-15	Wire and cable, Wash., D. C	4-14
4-16	Dock removal, New York	3-31
4-18	Stone, Vicksburg, Miss	3-31
4-19	Fire hose, Los Angeles, Cal	3-31
4-19*	Revetment, Vicksburg, Miss	3-24
4-20	Pneumatic tubes, New York	4-14
4-20	Canal, Cokeville, Wyo	4-14
4-21	Air compressor, New York	4-14
4-21	Fire apparatus, Vancouver, B. C.	3-24
4-22*	Dredging, Boston, Mass	4-14
4-23*	Dredging, Newport, R. I	3-31
4-25*	Dredging, Chicago, Ill	3-31
4-25*	Lock gates, Kansas City, Mo	3-31
4-25*	Coal pocket, wharf extension, Boston, Mass	4- 7
4-26*	Dredging, New York	3-31
4-27*	Levee, Greenville, Miss	3-31
4-27	Screws, Wash., D. C	4- 7
4-27*	Dredging, Ashtabula, Ohio	4-14
4-27	Seawall, Ft. Adams, R. I	4-14
4-28	Seats, New York	4-14
4-28*	Cement, Denver, Colo	4- 7
4-28*	Cement, Wheeling, W. Va	3-31
4-29*	Revetment, Grand Haven, Mich	3-31
4-29*	Crematory, Atlanta, Ga	3-24
4-29	Levee, Cincinnati, Ohio	4-14
4-30	See Algoma Central & Hudson Bay Ry.	4-14
4-30	Ditch, Olivia, Minn	12-22
5- 4	Ditch, Conde, S. Dak	3-24
5-11*	Power boat, Wilmington, Del	4-14
5-15	Watering carts, etc. (Garbage), Boston, Mass	3-24
5-16*	Diversion channel, East St. Louis, Ill.	4-14

Examinations.

4-20	Commandant of Cadets, Carlisle, Pa.	3-31
4-20	Banking economist, Wash., D. C.	3-24
4-20	Asst. chemist, Wash., D. C	3-24
4-20	Asst. physicist, Wash., D. C	3-24
4-20	Laboratory apprentice, Wash., D. C	3-24
4-20	Engr. in wood preservation, Wash., D. C	3-24
4-21	Subinspector, North Chicago, Ill.	4-14
4-30	Asst. Electrical Engr., Albany, N. Y.	3-31
4-30	Asst. Engineer, Albany, N. Y	3-31
4-30	Asst. Inspector of Gas, Albany, N. Y.	3-31
4-30	Examiner in Drawing, Albany, N. Y.	3-31
4-30	Junior Bridge Draftsman, Albany, N. Y.	3-31
4-30	Leveler, Albany, N. Y	3-31
4-30	Supt. of Construction, Albany, N. Y.	3-31
4-30	Water Analyst, Albany, N. Y	3-31
4-30	Bridge designer, Albany, N. Y	3-31
4-30	Bridge draftsman, Albany, N. Y.	3-31
4-30	Architectural draftsman, Albany, N. Y.	3-31
5- 2	Chemist, New York	3-24
5- 4	Teacher of Agriculture, Carlisle, Pa.	3-31
5-18	Library asst., Wash., D. C	3-24

Plans and Specifications on File.

The following plans (P.) and Specifications (S.) are on file (for reference only unless otherwise noted) at the office of The Engineering News Publishing Co., 220 Broadway, New York.

4-11*	Dredging, St. Paul, Minn.	(P. & S.)	3-24
4-15*	Pressure tunnel, Newton, Mass.	(P. & S.)	3-31
4-16	Dock removal, New York	(S.)	3-31
4-23	Fire protection, Boston, Mass.	(S.)	3-31
4-25*	Water system, Hood River, Ore.	(P. & S.)	3-31
4-30	Condenser, Boston, Mass	(S.)	3-31
5- 1	Irrigation work, Calgary, Alta.	(P. & S.)	3-24
5- 7	Condensers, etc., Philadelphia, Pa.	(S.)	4-14
5- 7	Storehouse, Bremerton, Wash.	(S.)	3-24
5- 7	Quarters, Bremerton, Wash.	(S.)	3-24
5-14	Storehouse, Vallejo, Cal	(S.)	4- 7
5-14	Bridge, North Chicago, Ill	(S.)	4- 7
5-21	Rebuilding, Portsmouth, N. H.	(S.)	4-14

ELECTRIC CONDUITS. — McRoy Clay Works, Rookery Building, Chicago, Ill. Paper; 3½ × 6¼ ins.; pp. 20; illustrated.

This relates particularly to clay conduits for railway signal and telegraph wires, and shows the advantages of underground lines as compared with those carried on poles. The conduits are used also in city work.

CONCRETE POSTS.—D. & A. Post Mold Co., 194 Third Ave., Three Rivers, Mich. Circular; 8½ × 11 ins.; illustrated.

The posts are of rectangular section, made in sets of ten in a steel mold, the concrete being consoliated by giving the mold a vibratory movement. Five railways have plants of their own, equipped with this company's apparatus.

GAS AND GASOLINE ENGINES.—Seager Engine Works, Lansing, Mich. Paper; 7 × 10¼ ins.; pp. 48; illustrated.

This is a descriptive catalogue of the Olds engine, with various modifications and applications, including both stationary and portable outfits. They are shown also as operating concrete mixing plants, traction engines, harvesters, etc.

FROGS AND RAIL BRACES.—Conley Frog & Switch Co., Memphis, Tenn. Paper; 9 × 12 ins.; pp. 4; illustrated.

The "Conley" frog, designed specially for heavy yard work, dispenses with guard rails, having guards which engage the face instead of the rear of the wheel. Ordinary frogs and switches are made also, as well as the "Dixie" rail brace.

ROOFING AND FLOOR MATERIAL.—The Berger Mfg. Co., Canton, Ohio. Paper; 6 × 9 ins.; pp. 32; illustrated.

Ferro-Lithic plates are flat or arched corrugated plates of specially shaped corrugation, on which is laid a thickness of concrete which can be used either as a roof or a floor. The present catalog describes in detail its construction and methods of use.

SMITH CONCRETE MIXER.—The T. L. Smith Co., Old Colony Bldg., Chicago, Ill. Paper; 6 × 9 ins.; pp. 35; illustrated.

This catalog describes in detail, with tabular statements of size and capacity, the well known "Smith" batch mixer. In addition to the regular description of the machine proper, there are a number of auxiliary attachments noted.

REINFORCED CONCRETE CONSTRUCTION. — Reinforced-Concrete Co., St. Louis, Mo. Paper; 6 × 10 ins.; Portfolio; illustrated.

In a very peculiar portfolio, the Reinforced-Concrete Co., of St. Louis, describe a number of structures which they have designed or built in the past ten years, and include also some standard specifications for building and fireproofing buildings.

CONVEYING AND COAL HANDLING MACHINERY.—Stephens-Adamson Mfg. Co., Aurora, Ill. Paper; 3½ × 6 ins.; pp. 24; illustrated.

Vertical and inclined pan conveyors for broken stone, and pan and belt conveyors for coal, ore and stone, are listed, with traveling trippers for discharging the load from belt conveyors. Two lake cargo steamers are being equipped with conveyors for discharging their cargoes.

STEEL REINFORCEMENT FOR CONCRETE.—The Clinton Wire Cloth Co., Clinton, Mass. Paper; 6¾ × 9¾ ins.; pp. 20; illustrated.

This pamphlet relates to electrically welded wire mesh for concrete and wire lath for building work. It contains a description of the concrete sheathing of the steel structure of the Boston Elevated Ry. and also extracts from a paper by Mr. Herbert Wilson on "Fire Resistant Construction of Buildings."

WATERPROOFING.—J. A. & W. Bird & Co., 34 India St., Boston, Mass. Paper; 6 × 9 ins.; pp. 43; illustrated.

This is a discussion of the theory of water percolation on masonry structures and a description of the waterproofing of such structures by the so-called "envelope" method and the application of the patented compound "tunaloid." This is illustrated by a number of structures which the publishing company have waterproofed.

TRACTIVE POWER OF LOCOMOTIVES.—American Locomotive Co., New York, N. Y. Paper; 8 × 10¾ ins.; pp. 8; 8 folding plates.

The principal features of this bulletin is the set of eight folding tables, giving the tractive power of a large number of locomotives having cylinders from 9 × 14 ins. to 30 × 36 ins., and driving wheels from 30 to 86 ins. diameter. The tables are for boiler pressures of 100 lbs. to 220 lbs. Other tables relate to speed and speed factors; the weight, area and heating surface of tubes, and the middle ordinates and tangent deflections of curves for determining the length of rigid wheelbase and the swing of trucks.

CRANES AND TRAVELING HOISTS.—The Euclid Crane & Hoist Co., Euclid, Ohio. Paper; 6¼ × 9½ ins.; pp. 16; illustrated.

This is a descriptive catalogue, including traveling trolley hoists and overhead traveling cranes, operated by electricity or by hand. The machines are of various types and sizes, up to 10 tons capacity for the hoists and 20 tons for the cranes.

PNEUMATIC TOOLS.—Independent Pneumatic Tool Co., First National Bank Bldg., Chicago, Ill. Cloth; 6 × 9¼ ins.; pp. 80; illustrated.

This is a descriptive catalog of the Thor tools, drills, riveters, etc., including also a small circular saw. The illustrations show the application of these tools to bridge, ship, car and machine shop work.

CONCRETE MIXER.—Chain Belt Co., Park St. and Eleventh Ave., Milwaukee, Wis. Catalog No. 39. Paper; 6 × 9 ins.; pp. 47; illustrated.

The "Chain Belt" concrete mixer is a batch mixer of the non-tilting, or chute-discharge type. It is driven by a chain belt from the shaft, which is in turn driven by a hoisting engine either on the same truck as the mixer or separately mounted. In connection with the mixer there are numerous devices for loading and dumping which assist materially in this operation.

TRACK AND SIGNAL APPLIANCES.—W. F. Bossert Mfg. Co., Utica, N. Y. Paper; 8¾ × 5¾ ins.; pp. 22; illustrated.

The "Triplelock" switchstand here described is operated in connection with a distant signal and has an electric lock by which the switchstand can be controlled from a signal tower or other point. The other appliances include insulated rail-joints, switch-point adjusters, semaphore blade clasps, guard-rail clamps, and spike braces.

CEMENT HOUSES.—Universal Portland Cement Co., Chicago, Ill. Paper; 6 × 9¼ ins.; pp. 129; illustrated. Price, 50 cts.

In a remarkably well printed and illustrated little book the Universal Portland Cement Co. has here described, with numerous photographs, a great number of artistic residences built either entirely or partly of concrete. The book is divided into sections on reinforced concrete, concrete block or tile with cement stucco, wood with stucco and, finally, some few pages on various kinds of concrete interior decoration. Anyone who is contemplating building a residence in any district where there is room for a detached house will certainly get some valuable hints from the book.

For other Proposal Advertisements see pages 51, 52, 53, 54, 56, of Advertisements and Construction News page 156.

ELECTRICAL EQUIPMENT.

Atlantic City, N. J.

Sealed proposals will be received by the Board of Water Commissioners of Atlantic City, N. J., until 2.30 P. M., May 3d, 1910, for furnishing and installing one 150 K. V. A. Alternating Current Generator, Exciter, Switchboard and Transformers at the Absecon Pumping Station, in accordance with specifications on file in the office of the Water Department, City Hall.

Each bid must be accompanied by a certified check for One Thousand ($1,000) Dollars, made payable to the Board of Water Commissioners of Atlantic City, N. J., which check will be returned on execution of contract and filing of bond by the successful bidder.

Should the successful bidder fail to execute the contract and file bond within ten days after notification of award his check will be forfeited and the award may be made to any other bidder.

As proper security for the performance of the contract a bond acceptable to the Board in the sum of Twenty-five Hundred ($2,500) Dollars will be required, and this amount shall be inserted in the contract.

Specifications will be mailed on application to the office of the Water Department.

The right is reserved to reject any or all bids.

LOUIS KUEHNLE,
RUFUS BOOYE,
JAMES PARKER,
Commissioners.

L. VAN GILDER,
Eng'r. and Supt.

Specifications for this work are on file in the office of Engineering News, New York.

SEWER.

OFFICE OF THE COMMISSIONERS OF SEWERAGE OF LOUISVILLE, KY.
(Incorporated.)

Sealed proposals for the construction of Section "B" Middle Fork Sewer, Contract No. 67, will be received at the office of the Commissioners of Sewerage, 605 Equitable Building, Louisville, Ky., until 12 o'clock noon, April 29, 1910.

The work consists mainly of the construction of about 2,960 feet of concrete sewer, diameter 36 ins., including 2,960 feet of earth excavation and 50 cu. yds. rock, average cut, about 9.4 feet, and about 860 cu. yds. of concrete.

Plans and specifications may be seen at the office of the Commissioners, and at the office of Harrison P. Eddy, Consulting Engineer, 14 Beacon St., Boston, Mass.

Sealed bids should be endorsed "Proposal for Section "B" Middle Fork Sewer," and addressed to the Commissioners of Sewerage, Equitable Building, Louisville, Ky. Each bid must be accompanied by a certified check for at least seven per cent. (7%) of the total amount of the bid, or a "Bidder's Bond," as described in the form of proposal.

P. L. ATHERTON,
Chairman.
CHAS. P. WEAVER, Secy. and Treas.
J. B. F. BREED, Chief Engineer.

WATER MAINS.

Wallingford, Conn.

Sealed proposals, addressed to the Chairman of the Board of Water Commissioners, for the laying of approximately 7,080 lineal feet of 8-in., 1,825 lineal feet of 6-in. and 350 lineal feet of 4-in. cast-iron water pipe and the excavation of about 50 cubic yards of rock, will be received up to 8 o'clock P. M. of Monday, April 25th, and publicly opened. These quantities are approximate only and will be used as a basis for comparison of bids. All bids must be made upon blank forms to be obtained from the Water Dept. Eng. and be accompanied by a certified check, payable to the Wallingford Water Fund, for the sum of One Hundred Dollars ($100.00), said check to be subject to forfeiture if the bidder fail to execute the contract should it be awarded to him. Specifications and form of tender can be obtained at the office of the Water Dept. Eng., Town Hall Building, Wallingford, Conn. The Wallingford Board of Water Commissioners reserve the right to reject any or all bids should it deem it to be for the best interest of the Borough of Wallingford to do so.

A copy of the plans and specifications is on file in the office of the Engineering News Publishing Co.

Wallingford Water Commissioners,
P. J. LEONARD, Chairman.

SEWER.

OFFICE OF THE COMMISSIONERS OF SEWERAGE OF LOUISVILLE, KY.
(Incorporated.)

Sealed proposals for the construction of Seventh Street and Hill Street Sewers, Contract No. 66, of the Comprehensive System of Sewerage for the City of Louisville, Ky., will be received at the office of the Commissioners of Sewerage until 12 o'clock noon, April 29th, 1910.

The work will consist mainly of building about 2,350 feet of sewer, 45", 39", 30" and 12" in diameter, depth of cut 9 ft. to 27 ft. and including about 400 cu. yds. of concrete and laying 200 ft. of 12" vitrified pipe sewer.

Plans and specifications may be seen at the office of the Commissioners, and at the office of Harrison P. Eddy, 14 Beacon St., Boston, Mass.

Sealed bids should be endorsed "Proposal for Seventh Street and Hill Street Sewers," and addressed to the Commissioners of Sewerage, Equitable Building, Louisville, Ky. Each bid must be accompanied by a certified check for at least seven per cent. (7%) of the total amount of the bid, or a "Bidder's Bond," as described in the form of proposal.

P. L. ATHERTON,
Chairman.
CHAS. P. WEAVER, Secy. and Treas.
J. B. F. BREED, Chief Engineer.

SANITARY SEWER

Jackson, Tenn.

Sealed bids will be received by Atwell Thompson, City Engineer, Jackson, Tenn., up to noon, May 3, 1910, for the following sanitary sewer work:

1,530 lineal feet of cast-iron pipe, leaded joints, size 16 inch.
192 lineal feet of 6" cast-iron pipe, leaded joints.
16—6" one eight cast iron bends.
7,744 lineal feet of 6" terra cotta pipe.
16,428 lineal feet of 8" terra cotta pipe.
2,002 lineal feet of 12" terra cotta pipe.
3,338 lineal feet of 15" double strength terra cotta pipe.
45—6 × 15" terra cotta Y's.
45—6 × 12" terra cotta Y's.
510—6 × 8" terra cotta Y's.
593—6" one eight terra cotta bends.
102 brick manholes with special design cast iron covers.
8 single 8" flush tanks.
2 double 8" flush tanks.

The average depth of the sewer ditch will vary from five to twelve feet.

Plans and specifications may be had by applying to Atwell Thompson, City Engineer, Jackson, Tenn., for the sum of $5.00 each.

FORT MONROE, VA., April 11th, 1910.—Sealed proposals, in triplicate, will be received until 10 A. M., May 11, 1910, for the construction, including plumbing and electric wiring and fixtures, of a Detachment Barracks, at Ft. Wool, near Fort Monroe, Va. Deposit of certified check for $25 required as guaranty return of plans and specifications. Bidders on proposals must state name of manufacturers supplying them material. Information on application. Plans and specifications may also be seen at Office Chief Quartermaster, Department of the East, Governor's Island, N. Y. The United States reserves the right to accept or reject any or all proposals or any part thereof. ERNEST R. TILTON, Captain and Q. M., U. S. A., Constg. Q. M.

TREASURY DEPARTMENT, Office of the Supervising Architect, Washington, D. C., April 7, 1910.—Sealed proposals will be received in this office until 3 o'clock P. M. on the 17th day of May, 1910, and then opened, for the construction complete (including plumbing, gas piping, heating apparatus and electric conduits and wiring), of the United States Post Office at High Point, North Carolina, in accordance with drawings and specifications, copies of which may be obtained from the custodian of site at High Point, N. C., or at this office at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect.

Situations Open

WANTED—A hustling foreman who has had experience on telford macadam roads; work near Baltimore, Md. HAMMOND AND SLOANE, 16 Exchange Place, New York City. 15-1t

SUPERINTENDENT OF CONSTRUCTION wanted by New York building contractors; man desired if possible who has had experience in all classes of work, both in architect's and contractor's offices. Give fullest details, including salary expected, etc. Address "W. B. 15," Engineering News, New York. 15-1t

CEMENT TESTER wants man familiar with testing and analysis of cement to take charge of laboratory. State salary expected and give experience in detail. Address "T. 15," Engineering News, 1636 Monadnock Block, Chicago. 15-1t

WANTED—Experienced draftsmen thoroughly familiar with detail crane design. State wages desired. TOLEDO-MASSILLON BRIDGE CO., Toledo, Ohio. 15-3t

SUPERINTEDNENT for reinforced concrete wanted by New York contractors; must be willing to work out of city if necessary. Give fullest details of previous experience, references and salary expected. Address "S. B. 15," Engineering News, New York. 15-1t

WANTED at once, several experienced checkers, column and beam detailers. HINKLE IRON CO., 534 West 56th St., New York. 15-1t

WANTED—About May 1st, young lady familiar with plan reading and general routine work in contractor's office. Must be accurate at figures and good writer. Address E. A. MATTHEWS, 13 Park Row, New York. 15-1t

WANTED—Experienced structural draftsmen for building work. The GEORGE A. JUST COMPANY, 239 Vernon Avenue, Long Island City. 15-1t

"WANT"

Advertisements in ENGINEERING NEWS cost 1½ cents a word an insertion for "Situations Wanted" and 3 cents a word for "Situations Open" and "Miscellaneous Wants." Read them weekly—they will help you.